NEW WORLDS SCIENCE FICTION

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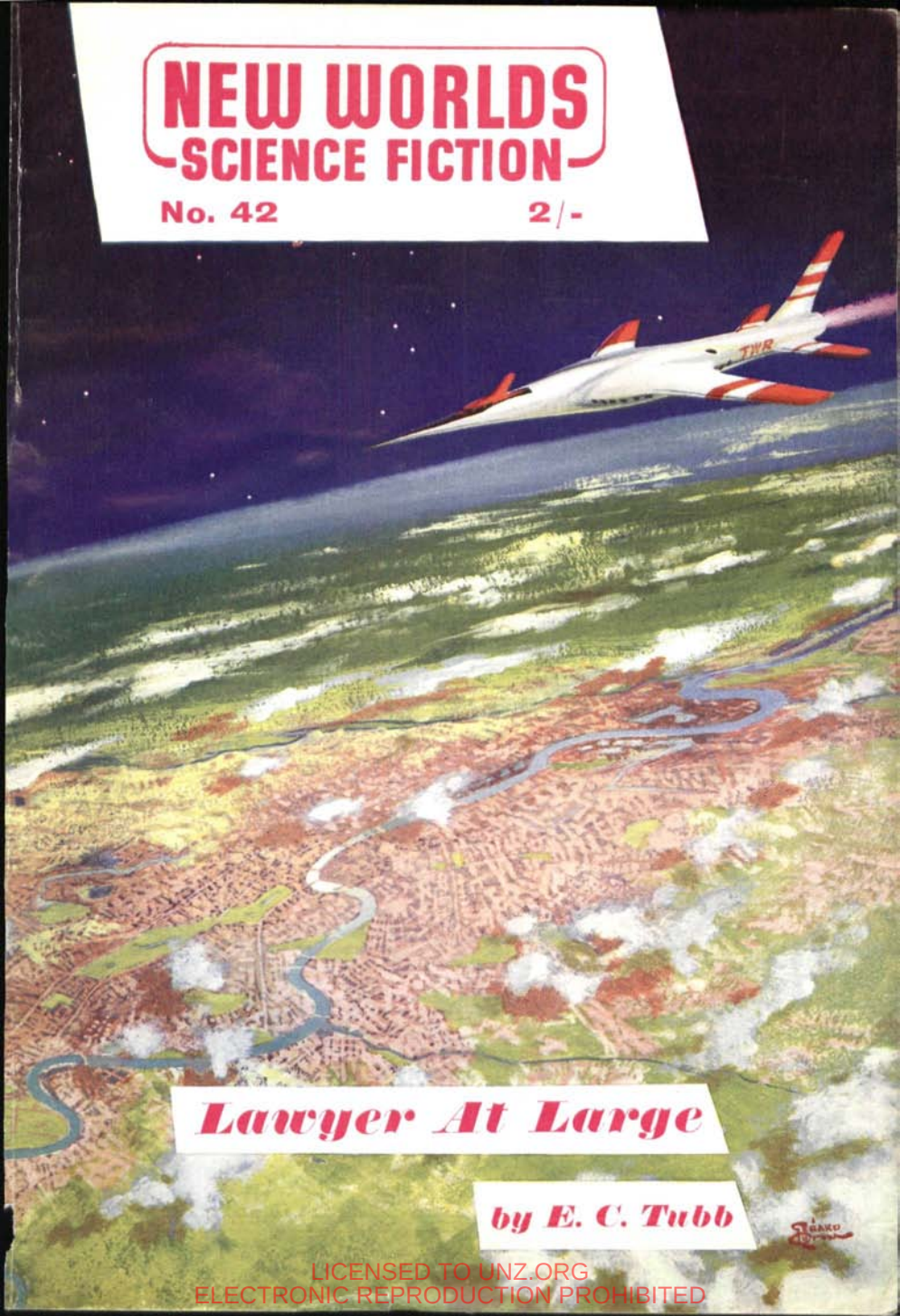

Lawyer At Large

by E. C. Tubb

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Brian W. Aldiss

Oxfordshire

Having just left the serious twenties behind, he is now beginning to feel young and frivolous. He fears, however, that he may be some sort of mental case, certifiable but unclassifiable, since his two main ambitions lie in diametrically opposite directions: to become a solemn, intense novelist and to write a really funny book.

The tragedy is yet unborn, but his first humorous book, *The Brightfount Diaries*, was published by Faber in October and is doing well. (Incidentally, it contrives to mention *New Worlds* on p. 131).

Authors who command his greatest respect are Proust, Thomas Hardy and Kingsley Amis. Sf plays an important part in his life: he has never quite recovered from his first pre-war encounter with the Grey Lensman. His debut was made in *Science Fantasy*, our companion magazine, with "Criminal Record." He won third prize in last Christmas's *Observer* Sf Competition, against stiff opposition, and is sf reviewer for *The Oxford Mail*. He thinks sf—in this country at least—is improving all the time, and hopes to see and help it become an accepted branch of literature in its own right.

Having been in action in Burma and Sumatra during and after the last war. Brian Aldiss now lives in Oxford. His plans for the future change almost daily, but he is definite on one point: his desire to write more and better stories for *New Worlds*

He is married and has one cherubic baby son, Clive. His interests include women and words; tactfully announcing his favourite woman to be his wife, he says his favourite word is 'detergent.'

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NEW WORLDS SCIENCE FICTION

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CONTENTS

Novelette :		
LAWYER AT LARGE	*by E. C. Tubb*	4
Short Stories :		
PUZZLE FOR SPACEMEN	*by John Brunner*	45
PANEL GAME	*by Brian W. Aldiss*	63
THE JAKANDI MODULI	*by Francis G. Rayer*	73
PRIME ESSENTIAL	*by Frank Weight*	91
GETAWAY	*by Michael Harrison*	105
Article :		
SOLAR INTERFERENCE	*by John Newman*	99
Features :		
EDITORIAL	*by John Carnell*	2
THE LITERARY LINE-UP	... ...	72
BOOK REVIEWS	*by Leslie Flood*	123

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Current Criticism

A glance at the Autumn announcements from most of the London publishers reveals a considerable change of policy in the presentation of science fiction in hard covers. It looks as though, for the time being at least, the hardy space-opera has had its day—certainly the swash-buckling pseudo-scientific themes full of gadgetry, faster-than-light space travel and weird and wonderful alien kitchen-sinks replete with tough heroes who whip up sizeable H-bombs from a piece of fused quartz and a hairpin are dying a natural if not over-late death.

The desire now is to find novels of a literary calibre that will stand up to the harshest scrutiny of the learned critics and it is more than possible that before very long you will have to hunt out such titles in the bookshops and libraries under the classification of "General Fiction." It would seem that the handicap of being labelled "science fiction" is prompting reputable publishers to shy away from the term where less than a year ago they were only too anxious to be associated with its possibilities. I feel that such a movement away from the term is commendable although where it will ultimately end is anyone's guess—certainly the publishers themselves do not know.

Let us face the fact that the hard cover science fiction novel as popularised in Great Britain two years ago when the first flush of enthusiasm for reprinting the American novel was at its height, didn't pay sufficient dividends. It is possible that such sales did not reach the figures of the ordinary detective novel although my guess is that they were far better than the western romance. That the trend of 1952-53 had to die was very apparent last year when there was a considerable falling off in the standard of novels and anthologies published in U.S.A. as well as in the number of such publications. Allowing for the year or more gap between what happens in America to be felt this side of the Atlantic, it was logical to expect a change in the British publishing field by this Autumn. Which is, in fact, taking place.

Thus far during 1955 the American scene is at its lowest ebb for many years and it is doubtful whether there will be more than half a dozen novels worth considering for next year's International Fantasy Award. Only Doubleday and Ballantine have managed to keep to a reasonable standard of literature, yet even so the former has been able to offer little that is better than average. This leaves our British publishers with even less to choose from than in earlier years and it is as well that they have already started looking for talent nearer at home.

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Here, of course, we are going to run into one of the fundamental snags that has haunted science fiction for some thirty years—how enthuse a writer of general fiction into tackling a futuristic theme which must of necessity require a certain amount of research into the validity of its theoretical assumptions. A good novel of the future requires almost as much research as an historical novel, and although writers of the calibre of John Wyndham and J. T. McIntosh, for instance, can consistently produce novels requiring little research (but plenty of careful planning and thinking) there are few general writers who have studied the background to the *genre* and know the technical taboos involved.

A feature writer in the October 22 *Bookseller* had ideas along the same lines in an article entitled " Are S. and F. Parting Company ?" in which it was pointed out that there no longer seemed to be a happy medium between the type of story preferred by the regular science fiction reader and that which is more enjoyable to the reader of general fiction—that most publishers prefer not to label their science fiction novels as such. This statement was largely promoted by references to Angus Wilson's Introduction to the Faber & Faber collection of the *Observer* prize-winning stories entitled *A.D.* 2500, few of which conformed to any known style of science fiction presentation, or, as Mr. Wilson put it " untouched by the stock conventions of the *genre*." By which remark I can but presume that " coming events cast their shadows before."

If you require still further proof that science fiction as we know it is about to undergo a radical change—at least on a national level—there is plenty of evidence that the teen-agers are no longer interested in space-opera. Members of the Younger Generation discussed John Wyndham's *The Kraken Wakes* on B.B.C. radio, October 18th, and made so much sense with their remarks that they thoroughly put to shame the panel of distinguished critics who tried to define by literary mathematics Arthur Clarke's *Childhood's End* a year ago (see *New Worlds* No. 26 editorial). Not only did the teen-agers logically break down Wyndham's cause and effect in his novel, plus the characterisation and dialogue, but they came up with the statement that they didn't particularly like stories of space anyhow. Which might at least be a pointer to Charles Chilton whose third " Journey Into Space " serial is now grinding through its twenty-week course on the radio that the general reaction to his current offering is little better than luke-warm. The day of the alien kitchen sink is over.

John Carnell

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In this month's lead story author Tubb poses a particularly neat and provocative problem—just where would the legal status of an alien visitor to Earth be defined according to Earth law? Could our human laws be applied to an extra-terrestrial? Particularly in a case of murder!

LAWYER AT LARGE

By E. C. Tubb

Illustrated by QUINN

I

The charge was the usual one of sabotage and the accused, a pale-faced manual worker with a low-grade I.Q. and a disproportional emotional index, didn't stand a chance.

Mark Engles, Attorney-at-Law, listened with growing pessimism as the prosecutor gave the evidence. It was pretty conclusive. Three separate recording machines had registered the fact that the accused had entered the supply room of the automation section with metal concealed on his person. The same machines had also recorded the fact that he had left without it. Metal had been found in the supply hopper and baking furnaces of the cake-making unit. The estimated damage was over twenty thousand credits not counting loss of production.

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Mark's own case was a laugh. The prisoner had refused to testify beneath the lie-detector and was relying on an unsupported denial of the entire episode. Privately Mark thought that he was guilty and so did the Union of Associated Pastry Workers who had briefed him to go through the motions of defence. He rose as the prosecutor finished giving his evidence.

"Your Honour," he nodded towards the Judge, "the defence wishes to point out that the entire evidence of the prosecution is based on various recordings. I quote the case of Smith versus Lampry; 269/45/2092, in which false recordings were used to secure an unfair conviction."

"Objection," snapped the prosecutor. "The case cited was one based on home-recordings. Those offered as evidence in this case were taken from sealed and certified sources."

"Objection sustained," said the Judge impatiently. He glared at Mark. "The Court is surprised that you should rest your defence on so flimsy a ground."

"The accused," said Mark desperately, "is of low I.Q. I also have certified evidence as to his emotional instability. At the time of the supposed crime he had reached the nadir of his emotional cycle and was approaching the manic-depressive stage. I submit to the Court that he was not wholly in control of his actions at that time."

"You wish to plead justification?" The Judge looked astonished.

"I wish to plead mitigation," said Mark firmly. He didn't look towards his client's agonised expression. To hell with him. The best Mark could hope for now was a reduction of sentence and even at that he was taking a long chance. He scowled at the evaluator. With a human jury he might have been able to sweet-talk them into an acquittal but emotions meant less than nothing to the cybernetic evaluator. Momentarily he wished that human jury's hadn't gone into the discard twenty years ago.

"I offer the evidence of mental instability and emotional maladjustment. The accused, a craftsman, has a fixed neurosis against the automation in the factory where he was employed. The fact that it could bake a better cake than he ever could played on his mind to an extent where he was not wholly responsible for his actions. While not denying the sabotage I wish to point out that it was motivated on an emotional, not logical, level." Mark drew a deep breath. "We wish to throw ourselves on the mercy of the Court."

The rest was simply a matter of routine.

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A clerk took the certified transcript of the prisoner's emotional cycle and fed the data into the evaluator. The prosecutor, knowing that he had already won his case, at first was generous and allowed mitigation, then made matters worse by proving that the accused had never baked a cake in his life. The Judge was impatient at the delay and blamed it all on Mark. Finally the evaluator hummed and spat out a length of tape.

"Guilty as charged," read out the clerk. "Allowable mitigation five per cent. Reason: accused should have reported sick with emotional instability. Failure to do so condones his offence."

And that was that.

Mark didn't stay to hear the sentence. He knew what it would be—five years corrective training and psychological adjustment. The allowable mitigation was far too small to make any difference and sabotage of the automation factories was a crime rapidly growing in importance to vie with that of outright murder.

He scowled as he thought about it. Somehow he was always getting the sticky ones. Trying to defend a defenceless case was bad both from the viewpoint of his own self-confidence and his business reputation. He guessed that the Union had only given him the brief because their own retained lawyers wouldn't touch it. A couple more failures to his credit and no decent firm would allow him to do so much as arrange a transfer of property.

He was still scowling when he bumped into Gale Hardin.

Gale was big, fat, overdressed in the newest synthetics and exuded a sickly, commercialised charm. Mark knew all this and, at the same time, knew that Gale never had to worry about unpaid bills, lost cases or the cases that just didn't arrive to be taken. He didn't like the man but then he didn't have to. All that was necessary was for him to pretend that he did. He replaced his scowl with a smile.

"Gale! Good to see you."

"Hello, Mark. How did it go?"

"The case?" Mark looked surprised. "Were you in court?"

"I dropped in for a few minutes. I was showing Riphan around, thought he might be interested you know, but we left before the verdict. Did you get an acquittal?"

"Guilty as charged," said Mark bitterly. "It was hopeless from the start. I even pleaded mitigation and only got a lousy five per cent. The union will love me for that."

"They should care." Gale shrugged. "You shouldn't have accepted their brief anyway. You'd have done better making a deal with the insurance company."

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"On the damages?" Mark frowned. "I don't get it."

"Simple. If you could have swung the verdict to total insanity the insurance company wouldn't have had to pay out on the factory damage claim. They could have pleaded non-co-operation. The factory medical staff would have had to take the blame for permitting an insane worker to remain in employment."

"But he wasn't insane," protested Mark. "Anyway, would the insurance company have been interested?"

"Not officially, but they'd have sent you a present if you'd have made a deal with them. You could even have run the two, taken the union brief and worked for the insurance people at the same time."

"And the accused?"

"He got time, didn't he? What's the difference where he spends it? At that you'd have done him a favour, they tell me that the mental homes are a lot better than jail."

"Sounds nice," said Mark sarcastically. "Unethical, of course, but what's the risk of losing my licence against money in the bank?"

"That's right," said Gale cheerfully. He hadn't noted the sarcasm. "Ethics hasn't paid any bills yet that I know of." He glanced at his wrist watch. "Look, Mark, I'm busy right now, but I may have something for you. You any good on partnership deals?"

"I passed in commercial law," said Mark stiffly, then remembered to smile. "Why?"

"May have a job for you. Will you be at your office this evening?"

"Yes." Mark hadn't intended to be there but he was in no position to pass up the chance of employment. With the law schools turning out more lawyers than could possibly be used no one could. Gale nodded.

"I'll call you. Right?"

He was gone before Mark could answer.

II

Mark rented a half-share of an office down in the poorer section of the city. His co-sharer, a self-styled private investigator who apparently lived on hope and charity, was out and Mark was glad of it. He was in no mood to listen to long, involved stories of adulterous lovers or about the time when Sam had had to chase a runaway husband all the way to the Moon. That, apparently,

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had been the high point of Sam's career in more senses than one, and he was never tired of repeating it to anyone willing to listen.

Kicking shut the door Mark picked up the few letters on the mat and crossed to his desk. The mail was still hand-delivered in this area and so was always received at least two days after posting. Not that it made any difference, bills, circulars and official notifications of court-sittings and changes in procedure didn't suffer from the delay. Throwing them into the waste chute Mark sat down behind his desk and waited for the call which might never come.

Sam returned while he was still waiting.

The private investigator was a small, wizened man with little shrewd eyes and a twisted ear which he consistently refused to have fixed by plastic surgery.

"Adds to the picture," he explained. "Gives me that air of toughness a private eye should have." Secretly he wished that the damaged car, which he had received during a fall when young, had been a scarred cheek or something more romantic. He nodded to Mark and put a paper carton of coffee on the desk.

"Busy?"

"Hope to be." Mark looked hopefully towards the coffee. Sam grinned and produced a couple of paper cups.

"I guessed that you'd be in. How did the case come out?"

"Rotten." Mark sipped at the coffee Sam poured out for him. "And you?"

"I've just been paid for a thing I did." Sam didn't explain and Mark knew better than to ask him. A born romantic Sam hated to be tied to reality. He had probably earned some money hustling packing cases or carrying luggage at the spaceport, but he would have died rather than admit it. He looked on the mat as if in search of a letter.

"Any mail for me?"

"No."

"You sure? I was expecting a cheque."

"No mail," repeated Mark tiredly. He had been through this before. "What's the matter, can't you pay your half of the rent again?"

"Well," Sam almost had the grace to blush, "you know how it is, Mark. Big things are moving but the money's slow. I'll pay it back, honest I will." Mark grunted.

"I paid a month's rent out of my retainer. But it's the last time, Sam. You pay next month's rent or we break up this happy partnership."

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"Thanks," said Sam cheerfully. He poured more coffee and they sat for a while in silence as they drank it. The videophone hummed as Mark finished his cup and, dropping the empty container, he reached over and switched on. A girl's face simpered at him from the screen.

"Mr. Mark Engles?"

"Speaking." Mark moved so that the scanners could pick up his image. "You want me?"

"Oh, Mark," she simpered. "Of course I want you. I want you to be with me on the most romantic trip ever devised. Just think of it, dear, you and I together on the Tycho Express. Dancing to the soft strains of Gibbon's Glowlights in the Earthlight Bar. Cuddling in . . ."

"A lousy commercial," said Sam as Mark switched off. "What'll they think of next?" He frowned at the dimming screen. "Not bad though. Direct contact and plenty of appeal. The spacelines must be getting desperate to try anything as raw as that."

"Raw is right," snapped Mark. He was irritable at the reaction. He had expected Gale to call, not some painted female trying to kid him into buying a trip to the Moon.

"The starlines have got them worried." Sam was still thinking of the commercial. "No one wants to go to the Moon or the planets now. Why should they? Nothing to see up there and a lot of expense to see it. Now that the Federation's contacted us they'll be running trips to the stars soon. Lots to see and do, no need to wear suits and no need to be cramped up for weeks at a time." He sighed. "We're living in a great age, Mark. A great age."

"If you've got the money," corrected the lawyer. "Me, I'd rather have the old days." He smiled at Sam's shocked expression. "All right, so I'm against progress. But I'm a lawyer and lawyers always are. Back in the last century we'd have both been rich. I'd have bought a snug practice and spent happy weeks in court arguing with men instead of machines. Corporation and criminal law paid well in those days. They didn't have evaluators then, nor all these recording machines, nor automation. A man got into trouble and, guilty or innocent, a lawyer got him out. Look at the fortunes some of those old-timers died with! I tell you, Sam, they had it easy in those days."

"Maybe," said Sam. He didn't seem convinced.

"There's no 'maybe' about it," insisted Mark. "I've read the old cases and I know. They had plenty of time then and a case might take days to settle. Then there were little tricks and things

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which slowed down the trial no end. Now what've we got? Machines. A machine in the jury box. A human judge, sure, but he's there just to check admissible evidence and to pass sentence. Everything's got to be facts, trimmed, isolated, fed into the evaluator. Emotion's got nothing to do with it and money even less. Either a man's guilty or he's not guilty. A man's got to be a logician now if he wants to be a lawyer." He pointed a finger at the private investigator. "Know what my old professor used to say? He said that, unless a man is a good chess player he should give up all idea of entering the law as a profession. He's got to be able to think three moves ahead and base his case on unassailable logic. That's the only way he can hope to win."

"Tough," admitted the little man. "But maybe it's got its good points. I mean, suppose I was accused of something, murder say, there wouldn't be much chance of my getting immiolated for it if I hadn't done it, would there?"

"No, but that isn't the point. Murder cases never did pay off. It was the litigation which made the old-timers rich. Partnerships and property settlements, wills and trivial things which ate up the cash and kept the lawyers on velvet." Mark sighed as he thought about it.

"We'll get by," said Sam encouragingly. "It's just a question of getting to know the right people and stepping in at the right time. Now take a case I had once. I saw a couple kissing in a car. Nothing to it you say, but I felt differently. They didn't kiss like a married couple and I was curious. I followed the woman home and found out that she was married. Her husband . . . "

Mark sighed. Sam was off again and there would be no stopping him until he'd finished. In sheer self-defence Mark began to read a law-book on partnership law while the little man's voice droned in his ears.

It seemed to go on for ever.

III

Senator Kingsman the accredited representative of the state of Arizona was a worried man. Despite that fact he managed to smile at his visitor and go through the customary details of hospitality and time-wasting manoeuvres before he allowed his guest to get to the point. When he did he was brutally direct.

"Senator," he snapped. "You've got to do something about these aliens."

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"Do?" Kingsman managed to keep his expression bland. "What can I do?"

"I don't know and I don't care but whatever it is you'd better do it soon." Harland, president of Trans-Solar Spacelines didn't trouble to hide his impatience. "Unless something's done soon we'll be out of business. Traffic, aside from the usual essentials, is down to a trickle. The spacefleet is travelling with low-rate payloads and the concessionaires are screaming for blood." He paused. "Your blood."

"Mine?" The Senator looked shocked. "Really, Harland, how can they hold me responsible for the unfortunate fall-off in trade?"

"Because they voted you into power," said Harland. "Or rather we paid for the votes, which comes to the same thing." He looked directly at Kingsman. "You've had it easy so far, Senator. Now's the time for you to start working for what we've done for you."

"Please!" Kingsland knew that his study was private, he didn't even have an old-fashioned telephone so as to beat the wire-tappers, but some things shouldn't be talked about even in private. He made certain that the doors were locked, the electronic heterodyning barrier working as it should, and the widows shielded. Harland watched him make sure of his privacy with ill-concealed impatience.

"Satisfied?"

"You can never be too sure," said Kingsman. "Only the other day a Senator was arraigned for private deals inconsistent with his high calling. A snoop managed to focus a parabolic microphone on him while he was discussing a deal. I don't want that to happen to me."

"It won't," promised Harland. "At least it won't as long as you play things our way." He sat back in the chair, a heavy-set man with hooded eyes and a cruel mouth. "Now, let's get to the point. We gave you the election because we wanted someone in a position to take care of our interests. The way things are you aren't doing that."

"How can I? I can't make people travel on your spaceships. Anyway, you still have the monopoly of supplying the colonies with staple foods."

"Bunk," said Harland shortly. "What staples? With their automation factories all they require is power and raw materials. Power they have in plenty—atomic power. Raw materials, aside from trace elements and rare earths, they have all around them." He glowered at the Senator. "You know what we are ferrying to Mars now? Vitamins! Two ship-loads and they have enough to last them for the rest of the century. The same to Venus. Tycho

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takes a little more but that's mostly luxury goods. It's getting to the point where we're making the trips for the fun of it."

Harland fumbled in his pockets, produced a cigar case, selected one, bit off the end and lit it with an inlaid lighter.

"The most profitable commodity we can carry is the tourist trade. Men and women, boys and girls with a pocket full of credits and a yen to see the System. Nothing else we can carry pays as well." He glared at Kingsman through a veil of smoke. "Surprised? Why should you be. A tourist is ready made. He pays a hundred credits a kilo passage money. He's a two-way pay-load. He spends money on arrival and so our concessionaires are happy to pay us for their concessions. Add souvenirs, extra freight charges for overload, food and drink other than the basics consumed during the voyage. Add insurance premiums, personal recommendations and repeat trips and you've got a juicy slice of business." He took the cigar from his mouth and scowled at the tip. "We want to keep it."

"Naturally," said Kingsman. He reached for a cigarette and added to the smoke filling the sealed room. "And you blame our visitors for the fall in trade?"

"Yes. They can offer more than we can. Their starships are bigger, smoother, more comfortable. But aside from that they offer what we can't. Trips to the stars. Who wants to look at the deserts of Mars when they can travel to another solar system? So people are saving up for when they can buy a berth on a starship."

"That's silly," protested Kingsman. "The aliens aren't offering passage to anyone. All they've done so far is to land a trading and investigation commission. It may be years before they begin offering travel facilities."

"And in the meantime we starve," said Harland grimly. He looked at the Senator. "Have you any suggestions?"

"No," said Kingsman unhappily. He was beginning to wish that he'd never got mixed up with Harland. Still, if he hadn't then he would never have been elected and he liked his job. He liked it very much. Harland shrugged.

"Very well, then, let's examine the problem. How do you stand as regards the aliens?"

"I haven't thought much about it," said Kingsman cautiously. "I've been waiting to see how things turn out."

"Sitting on the fence, eh?" Harland nodded. "Well, now is the time for you to get down and start fighting. What's the picture?"

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"Well," Kingsman was still uneasy at breaking government confidence. "They want us to join their Federation and open our markets to trade and general business. The President is dickering. He hasn't had the final go-ahead from the World Council and yet he knows that if he does accept the rest will fall in line."

"So he's sitting on the fence too? Why?" Harland shot the question as though it were a bullet from a gun. Kingsman swallowed.

"The aliens have the interstellar drive. We want it. The President hopes that they will give it to us in return for joining their Federation."

"And will they?" Harland was eager. Kingsman shook his head.

"They say not. They say that we must pass a period of probation before we are given the knowledge to build our own star fleet. They remind us of the fact that the World Council is only fifty years old and that it only came into being because of war. They say . . ."

"To hell with what they say," snapped Harland. "The position is this. They won't give us the drive so we can't compete with them. At the same time they want us to join them so that they can skim our trade. That means they will soak up the tourist trade from Trans-Solar. That means we go out of business."

"No it doesn't. You'll still have the government charter to supply and contact the colonies. You've got the mail contracts too."

"We can do without them," said Harland curtly. "Anyway, what's to prevent the aliens from running their own interplanetary service? With the ships they have they could do it easily while waiting for an interstellar cargo. Trying to compete with them would be the same as a man on a raft trying to grab the trade from an ocean liner." He dragged savagely at his cigar. "Damn them! I've built up Trans-Solar from a couple of ferry rockets supplying the television station to what it is to-day. It's a good service and I'm proud of it and I don't want those aliens coming in and making us all feel small." He looked at Kingsman. "You've got to stop them."

"How?"

"How do I know? Vote against them. Lobby against them. Line up the Conservationists and the fanatics. Do some horse-trading and line up some opposition." Harland grinned. "You won't find it so hard. I'll get to work on the press and radio. A few rumours and a whispering campaign should help things." He

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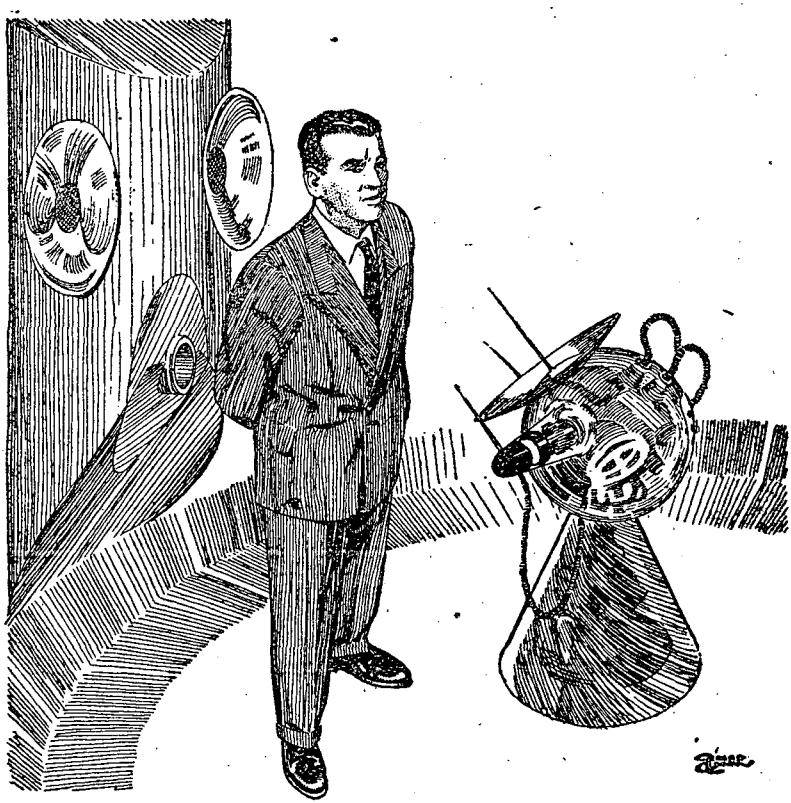

grinned again. "I want the choice of two things. Either they give us the drive so that we can enter into full competition with them, or they get to hell off Earth and stay off for good. Of the two I'd prefer the drive."

"I doubt if you'll get that," said Kingsman unhappily. He could see that his future wasn't going to be pleasant. Harland shrugged.

"Then get them kicked off of Earth. I don't care how it's done but it had better be done soon. Otherwise someone else will be warming your chair in the Senate and you'll be feeding an automatic for a living."

Harland grinned through the smoke of his cigar.

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IV

Gale didn't videophone, he called in person. Sam was still talking, this time about a case he had worked on a long time ago, when the door swung open and the fat man entered the room. He stared about him as Mark, quick to seize an opportunity, silenced Sam with an expressive gesture and filled in the silence with smooth talk.

"I understand, Mr. Leman," he said. "I'll get to work on it right away. Ten to-morrow suit you?"

"Yes," said Sam. He winked. "Thank you Mr. Engles. I'll tell Fenman that you'll accept the case." Fenman was the local numbers king. He ran a semi-legal racket depending on the winner guessing the total number of items produced by the automatics in the city. Gale waited until Sam had left the office, his broad features expressionless. If he had caught the blatant falsity of the conversation he made no sign of it. He sighed as he plumped into Sam's chair.

"My feet are killing me. Riphan wanted to see everything and he wanted to walk. Wouldn't have a drink handy, would you?"

"Sorry." Mark didn't have to look. He knew that any liquor in the office would have been drunk by Sam long ago. Gale sighed again and slowly drew a flat bottle from his side pocket.

"I thought so, that's why I bought my own. Got any glasses?"

Mark hadn't but he salvaged the paper cups they had used to drink the coffee, rinsed them beneath the faucet, and stood them on the desk. Gale broke the seal and poured out a generous measure of whisky into each cup. He sipped, grinned, and sipped again.

"I needed that. Riphan doesn't understand why men should poison themselves for pleasure so I had to remain on the wagon while I was with him." Gale emptied his cup and refilled it from the bottle. "Busy, Mark?"

"So, so. I've something coming up to-morrow."

"Fenman?"

"Maybe."

Gale chuckled with a force which sent little quivers running over his fat. "Don't kid me, Mark. You're broke and you know it. Fenman wouldn't touch a lawyer like you, anyway. He's too big."

"So he's too big," said Mark coldly. "Is that what you came to tell me?"

"No." Gale took his time drinking his second helping of Scotch. "I mentioned a partnership, Mark. Remember?"

"I remember."

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"I want it fixed like this. My partner to share responsibility as well as profit. Can do?"

"A simple commercial contract would cover that," said Mark. "Each partner to be fully responsible for debts incurred by the other partner or partners within the business. Such responsibility to be the full extent of capital, income and possessions. Each partner to be fully responsible for any unethical or illegal conduct, other than criminal conduct, by any other partner or partners. Each partner to share in any and all profits and capital possessions of the partnership according to previous agreement. Any such agreement does not, however, reduce the liability of any partner which shall always be equal to any other partner or partners." Mark drew a deep breath. "Still want it?"

"I think so. Why?"

"It's a dangerous business," explained Mark. "A partnership is all right with a well-established firm but to enter into one with an unknown is begging for trouble. He can ruin you before you know it. Better form a limited liability company. It's safer."

"But not as binding," said Gale shrewdly. "I'll take my chances. When can you have the contract drawn up ready for signature?"

"To-morrow morning. I'll have to get an authorised form from the court," explained Mark quickly. "I can be your witness, my licence permits me to adminster the oath, but I can't do anything about the seal."

Gale thought about it for a moment, then nodded. "Okay. I guess to-morrow will have to do though I was hoping to get it finished to-night."

"Makes no difference," assured Mark. "It won't be legal until deposited at court anyway." He drew a scratch pad towards him. "You might as well let me have the relevant information now. Name of company?"

"Interstellar Traders," said Gale smugly. "There'll just be the two partners, me and Riphan."

"Riphan? The alien?" Mark looked dubious. "That alters things."

"Why?"

"There hasn't been a decision on their legal status yet. Until there is this partnership won't be valid." Regretfully he put away the scratch pad. "Sorry, Gale, it looks as though we can't do business."

"Why not?" The fat man dabbed at his moist forehead. "Don't kid me, Mark. I've sunk all I own into this thing and I'm

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in no mood for humour. Draw up that form and leave the rest to me."

"It'll be a waste of time," warned Mark. "It won't be any more valid than if you entered into partnership with a sixteen year old. No court would uphold it. More, both of us would get into trouble, you for insisting and me for permitting."

"Not if it isn't deposited at court," said Gale shrewdly. He leaned forward across the desk. "Look, Mark, I'll come clean. You know that I've been running around with Riphan, showing him the sights, getting friendly, all the rest of it. Well, I didn't do it because of my health. Riphan's a member of the trading commission and wants to get into business. He's got a warehouse of stuff ready for the markets and can arrange lots more. I managed to get in on the ground floor and that's where I want to stay. This partnership agreement will tie him up and put him where I want him. There!" Gale made an expressive motion with his thumb.

"You're playing with an H-bomb," said Mark grimly. "Riphan isn't a moron, he'll catch on for certain."

"Riphan is an entrepreneur," said Gale. "Like me. He saw a chance to make a profit and took it. Why do you think he's been running around with me instead of staying with the rest of them at World Council Headquarters? That boy's smart. He wanted to feel out the market and get organised before anyone else has a chance. If I don't tie him down someone else will."

"Not until he has legal status," reminded Mark. Gale snorted his impatience.

"To hell with his status. Let me get him to sign that form and he'll believe that we are partners. As his partner I'll have access to his stuff. It's worth millions, Mark! Billions! It's the chance of a lifetime!"

Gale sweated with the thought of it and dabbed at his forehead again. His eye fell on the bottle and he drank straight from the neck.

"Listen, Mark, I've got it all worked out. You get the form and leave the date blank. We sign it and, if ever the aliens get legal status, you fill in the date and deposit it in the normal way."

"No," said Mark. He helped himself to the Scotch, the strong whisky burning his stomach and reminding him that he hadn't yet eaten. "It wouldn't work. You're underestimating Riphan, Gale. He must be a pretty shrewd customer to even think of trading on a new planet. What makes you think he'll sign anything without advice?"

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"I've thought of that." Gale grinned at his own cleverness. "I took him into court while your case was on. I did that for a reason, he now knows that you are an accredited member of the bar. You can show him your licence and he can check with the records or with anyone he pleases. We aren't trying to pull anything on him, Mark. All I want is to become his partner. The only thing we needn't tell him is that he has no legal status. Even if he knows that it needn't make any difference. Better still, in fact. That way he'll have to trade through someone who has got it. I just want that someone to be me."

"Sounds reasonable," admitted Mark. He took another drink of the whisky. To hell with worrying about ethics! He was hungry, his pockets were empty, and the spirit was going to his head. A man never got anywhere being honest. Let the suckers take care of themselves. Money in the bank was your only friend. He needed a new suit. He stared at Gale.

"What's in it for me?"

"That's the boy!" Gale grinned his relief. "You'll do it?"

"Maybe. What's my cut?"

"A hundred down and a hundred more when the job is done." He looked at Mark. "What's the matter?"

"I can't see so good," explained Mark. "Those figures are too small."

"All right," sighed Gale. "I need you, Mark, and I'm willing to pay. "Five hundred cash for the job. Five hundred more for your signed contract to represent me at any time if and when I need a lawyer. Agreed?"

"Why you? Why not the firm?"

"Same thing, isn't it?" Gale winked. "Be your age, Mark. Once you're in you might as well get in all the way. Call the second five hundred a retainer and you'll know what I mean." He took a bulging wallet from his pocket and Mark felt quick regret that he had not asked for more. He took five hundred, letting the crisp fifty-credit notes crackle in his fingers, then put them away and wrote out the commitment. He held it out to the fat man.

"Here. Call me to any place, any time, and I'll come running."

"Thanks." Gale took the slip and stuffed it into his wallet. He corked the bottle and slipped it into his pocket.

He was grinning as he walked out of the office.

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V

Senator Kingsman was going strong. He stood before the Senate, a commanding figure with his carefully whitened hair, his carefully massaged cheeks and his bland, innocent features. His voice, the only genuine thing about him, was just rough enough not to annoy and yet cultured enough to ensure respect. He was delivering a tirade aimed at the aliens, he was careful never to call them Lomians, and nothing was too bad for him to accuse them of.

"They came here," he said, "uninvited, unasked, uncalled for. They came in their ship and what do they do? They tell us, the inhabitants of this planet, that we are to join their Federation! They tell us, the owners of this world, what to do! Their audacity, ladies and gentlemen of the Senate, is paralleled only by their insufferable insolence in informing us that we are too backward, too primitive, to be entrusted with the secrets of their science. And yet . . ."

Harland grunted and switched off the tri-di colour screen. For a moment the figure of the Senator mouthed in silence, then, with a blur of washing colour, he dissolved into pearly-grey nothingness.

"Nice repetition," said Vernon. He lounged in his chair, his pale blue eyes almost closed and his flaxen hair falling over his forehead. "Who wrote it?"

"Some professor from the Semantics Institute." Harland didn't believe in letting his left hand know what his right was doing. "How are you getting on with your part of the job?"

"Fair enough. I've got fifty people out on the whispering campaign. I've got another hundred spreading rumours. By this time to-morrow everyone will have heard that a chamber-maid was attacked with dishonourable intent and that she was bribed not to make a complaint. They will also have heard that three babies are missing and believed to have been stolen by the aliens. They are the rumours. The whispering campaign is that the aliens are trying to get our secrets without giving us any of theirs in return."

"And your future programme?"

"After three days we release a further set of rumours," said Vernon languidly. "I've got some really good ones lined up from plague to destruction of the automatics and radiation danger from the engines of their ship. Have you fixed the schedule with the papers?"

"The reports will appear," promised Harland. "Have you found anyone ready to swear a complaint yet?"

"I've a couple lined up."

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"I want them more than lined up," snapped Harland impatiently. "I want them ready to move."

"You'll get them." Vernon didn't let the big man's impatience worry him. "It isn't as easy as you make out. I've got to select people close to the aliens, women for preference though men will do in a pinch. It's no good them swearing out a complaint if the defence can prove that they were nowhere near the aliens at the time of the incident. Even your fancy conditioning so that they can fake lie-detector testimony won't help in that case."

"I'm not concerned in getting a conviction," said Harland coldly. "All I want to do is to arouse a stink. The bigger the stink the better chance we'll have of getting them sent home with a flea in their ear." He frowned down at his finger-nails. "I wish that I could think of some way to make them want to go of their own accord."

"I can think of a way," said Vernon. He smiled at Harland's expression. "No I'm not telling you. For one thing you wouldn't stand for it and for another it's best for you not to know."

"Then don't tell me," said Harland quickly. He scowled out of the window to where a hundred foot sign advertised the beauties of the Earthlight Bar at Tycho. "How is the advertising going?"

"Three complaints as to violation of privacy causing domestic crisis." Vernon chuckled. "Our direct contact advertising on the videophone made some wives think that their husbands were having an affair. The fools switched off too soon." He shrugged. "A letter of explanation and apology together with a half-rate Tycho Express offer smoothed them out. No need to worry."

"Better not try that again, anyway," said Harland. "I never did think much of it, undignified and the customer reaction may swing opposite to what we want."

"I disagree," said Vernon calmly.

"Perhaps, but we won't try it again."

"No? Would you like me to tell your pilots how to operate their ships?" Vernon stared at the big man. "You needn't answer. They know their job and I know mine. While I remain in charge of advertising we advertise in the way I think best." He smiled. "Now don't lose your temper, Harland. My schedule doesn't permit any alteration. What if we do arouse a little negative reaction? We haven't got any competition that I know of and they either ride with us or stay at home. And they won't want to stay at home."

"And the aliens?"

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"I'll settle the aliens." Vernon relaxed, smoothing his flaxen hair. "How far can I go on expenses?"

"As far as you like—if it does the job." Harland smiled at the man in the chair. "If it doesn't you'll be out filling in blast pits."

He kept on smiling.

VI

The videophone hummed and Mark switched on to reveal the taut face of an athletic-looking man.

"Brother," said the man, "are you lonely?" He gave a wink. "Let me tell you about the girls on Venus. For . . ." His face gaped and swirled as Mark cut the connection. Another lousy advertising stunt instead of a customer. He wondered savagely how they expected lawyers to live. He could go chasing ambulances, he supposed, but no, all that was taken care of by the Mutual Protection Agency with their resident lawyer at each hospital and morgue. Advertising was out, he'd tried that and lost money with only a flood of circulars and a single client who wanted him to take her case on a strict no-win, no-fee basis. The case had been hopeless and he'd had to refuse.

Thinking of cases made him remember Gale. He hadn't seen either the man or his alien friend since they had signed the partnership agreement several days ago. He wondered how the fat man was making out.

He looked up as the door opened and the object of his thoughts came bursting into the office.

Gale was sweating with the effort of moving quickly. He slammed a brief case onto the desk and slumped into a chair. He gasped, fought for breath, and pointed at the brief case.

"Hide it. Quick!"

"Why!" Mark didn't touch the case. He stared at the fat man until Gale managed to receover his breath and could talk like a human being.

"Take care of it for me, Mark." Gale smiled with his mouth. "It's private papers, some stuff I want you to take care of for me. Will you?"

"Take care of it? Sure, why not." Mark lifted the brief case and stepped out of the office. Sam, coming towards him down the corridor, stared curiously at the brief case."

"I've seen that before," he said. "That fat character was carrying it."

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"That's right." Mark gave him the case. "Take care of it for me, will you? Hide it somewhere and let me know how to find it later."

"Sure." Sam took the case. "Trouble?"

"I don't know yet." Mark watched as the little man vanished down the corridor and then returned to his office. Gale had fully recovered and was lighting a cigarette. He offered the pack to Mark who took one, puffed it into life, then stared at Gale.

"Want to tell me?"

"It's Riphan." Gale looked ugly. "That lousy alien wants to revoke on our deal. I've given him a transcript of the laws appertaining to partnership agreements but he doesn't want to play. He said that he didn't know I was a crook and wants to call the whole thing off."

"Why?"

"I pledged his credit," explained Gale. "As his partner I had advance information the way things were going." He chuckled. "At least that's what everyone thought. He found out about it and turned nasty. I grabbed my stuff and came straight here to warn you."

"Warn me?" Mark looked blank. "What about?"

"He's going to file a complaint with his commission. That means they'll take it to the Supreme Court. You said yourself that administering the oath on that partnership agreement was against the law. Yet you did it and collected a fee for the job. If Riphan complains you'll lose your licence for sure."

"No I won't." Mark smiled at the fat man. "I never deposited that contract. Once I destroy it there'll be no proof against me whatever. All I need to do is to deny the whole thing. No evidence, no case. You should learn some law, Gale."

"Should I?" The fat man sighed. "I've got a surprise for you, Mark. You haven't got that contract, I have." He looked apologetic. "I thought it would be safer with me so I had one of my friends take it out of that tin box you call a safe."

"Breaking and entering! That's a felony."

"Not really. A man is entitled to his own property, Mark. Or would you like to explain to the court why you retained it in your possession?"

Mark felt a sudden chill. Gale was right, he was heading for serious trouble if the matter ever came to light. Malpractice was more than just frowned upon. It ranked with sabotage as a crime and was treated accordingly. It didn't matter as to the degree of malpractice either, the evaluator took notice of big crime or little

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crime; it was only interested in crime. He looked up as the door swung open again and Riphan entered the office.

Mark had seen the alien before, all the world had seen one or the other of them, either on television or by personal contact, and the main feeling had been one of surprise that they differed so little from men. There were differences, of course, the head-crest, for one, the seven-fingered hands for another. They were a little taller than a man and had a blue tint to their skins. That and the slit-pupils of their eyes were the only obvious differences.

"I want my papers," said Riphan without preamble. His English was almost too perfect. "You stole them and I want them back." He glanced around the office. "Where are they?"

"I don't know what you're talking about," said Gale coldly. He stared at Mark. "Tell this blue-skin where he gets off. Tell him that any assets of a partnership are joint property. Tell him that."

"I am not your partner," said Riphan. "I want my papers."

"Well?" Gale remained staring at Mark. "You're my lawyer. What are you waiting for?"

"Is this the call you paid for?"

"Yes."

"Very well." Mark sighed and turned towards the alien. "What's all the trouble about?"

"This man has stolen some papers from me. They were not the property of the firm he tricked me into joining. Even if they were he has no right to them. The partnership was invalidated by his failure to disclose to me the fact that he was once accused of false representation."

"I was acquitted," said Gale.

"That does not matter. Under Lomian law a full declaration must be made before an accredited witness. This man," the alien gestured towards Mark," is an accredited witness on this planet. You failed to make a full declaration. Therefore the contract is invalid. Incidentally I intend to make a complaint to my commission. This man has caused me much expense and inconvenience."

"Wait a minute," said Mark. Privately he cursed the fates for even having mixed him up in this business. "Must you do that? Make a complaint, I mean. I assure you that we acted in good faith."

"I do not doubt it," said Riphan politely. "You also seem to have been deluded by this man. However, as I wish to retain an unblemished business character I have no choice. The failure to report a crime is equal to participating in one. May I have my papers now?"

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"Look," said Mark desperately. "If I give you back the papers will you forget about making a complaint?" He ignored Gale's gesture of protest. "Can't we make a deal, your papers for your silence."

For a moment he thought that the alien would agree, then, reluctantly, Riphan shook his head.

"No. The papers aren't as important to me as my business reputation. If it was ever discovered that I had condoned a crime I would be accused, penalised, and banned from trading. I cannot risk that. I am sorry but I must report the entire incident to my commission."

He moved towards the door.

"Hell," said Gale. He rose to his feet and put one hand into his side pocket. "Riphan!"

"Yes?"

Gale shot him with something he had taken from his pocket. Immediately he turned and threw it towards Mark. Instinctively the lawyer caught it and stared at a small pistol. He looked from the gun to where the alien had slumped in an untidy heap on the floor.

"He's dead," he said stupidly. "You killed him."

"That's right," said Gale. He was sweating but he forced a grin. "What are you going to do about it?"

Numbly Mark reached towards the videophone.

VII

The case was scheduled to be tried in three days' time. Because of the repercussions, the open-and-shut nature of the case, the obvious guilt and certainty of conviction, delay had been cut to a minimum. Politics too had something to do with it. The Lomians, shocked and horrified at the wanton destruction of one of their number, were demanding justice. The World Council, terrified that the newly contacted Federation would either take their own justice or, worse, refuse to maintain their contact, had slashed what little red tape there was to give priority to the trial.

Everything was over but the shouting.

Mark thought so and felt sick in his insides as he thought about it. Gale would be certain to bring everything out at the trial and Mark had an uneasy feeling that he wouldn't be a lawyer for much longer. Tiredly he punched the activating button as the videophone hummed and stared at the smooth face of a flaxen-haired man.

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"Mr. Mark Engles?"

"Speaking."

"My name is Vernon. You don't know me and have never seen me. I am interested in the case of Gale Hardin."

"So?"

"So I suggest that you go and see him at once."

"I can't. I don't want to. Even if I did want to he's held incommunicado."

"True, but as his lawyer you have the right of access."

"His lawyer!" Mark glared at the smooth face of his caller. "What gave you that idea?"

"He did. Something about a signed promise to attend him whenever he called. He mentioned that a fee had been paid."

"That call was taken care of when he shot the alien."

"Was it?" Vernon shrugged. "I understand differently. I understood that he still holds a certified form of yours." He shrugged again. "I know little of the law but isn't it considered to be unethical to accept a retainer and then refuse a case?"

"Not if the case is detrimental to the business reputation of the lawyer."

"Was that specified?" Vernon smiled. "Never mind. I'm sure that you can sort out all these little difficulties with Mr. Hardin. He's waiting for you, Mr. Engles. Goodbye."

His face faded and Mark scowled at the blank screen. Vernon, whoever he was, had managed to deliver the threat beneath a seeming cloak of innocence. The certified form he had mentioned was that triple-damned partnership agreement. Gale was using it as a club to make Mark attend him in jail and, if Mark hoped to salvage anything from his career, he had to see the fat man.

It wasn't easy to locate the prisoner. Finally Mark ran him down in an out-of-town precinct and fumed impatiently while the officials tried to think of every excuse in the book to deny him access. They only yielded when he lost his temper.

"Look," he snapped, "Mr. Hardin has my written promise to attend him whenever he should call on my services. That makes me his accredited lawyer. If you refuse to let me see him I'll file a complaint at the Bar Commission. I'm not going to be penalised for unethical behaviour because of you."

They checked his claim against the property they had taken from the prisoner and found the signed slip. Mark took it, stuffed it into his pocket, and followed the turnkey into the consultation room.

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Gale grinned at him as he entered through a second door.

"Mark! It's good to see you."

"Is it?" Mark sat down and glared at the fat man. "Why did you send for me, Gale?"

"Isn't that obvious? You're about the only lawyer I can trust to represent me in court with the intention of securing an acquittal instead of throwing me to the wolves." He held up his hand against Mark's protest. "Now take it easy, Mark. At least listen to what I have to say before you fly off the handle." He stared around the room. "Is it safe to talk?"

"Yes. These rooms are supposed to be inviolate. Anything said between us is on a confessional level. Even if they have wired the place they can't use what they hear as testimony for the prosecution. If they tried it we would win the case by default." Mark shifted uncomfortably on the hard chair. "What makes you think that I'll agree to represent you?"

"Because you've got no option," said Gale curtly. He smiled at Mark's expression. "Look at it from the prosecution angle if I should choose to talk. You and I were partners in a criminal enterprise, getting Riphan to sign that contract. You knew that you were breaking the law. Riphan found out about it and threatened to complain to his commission. That meant you would be accused of malpractice and penalised for it. To stop his mouth we had to kill Riphan. That makes you an equal partner in the killing because all acts stemming from an illegal association are deemed to be the joint responsibility of that association. Right?"

"You wouldn't," said Mark despairingly. "You know damn well that I had nothing to do with the murder."

"No? Your fingerprints were found on the gun. You were present at the scene of the crime. You had a motive for killing him and you were mixed up in the swindle." Gale grinned at Mark's expression. "So it's a frame. So what? With the way the World Council are feeling they'll be only too glad to give me company on the way to permanent immiolation. It will boost their credit with the aliens and give them a couple of brain-unit cybernetic controls. What have they got to lose?"

"I'll testify beneath the lie-detector."

"And you'll have to confess your criminal knowledge of the partnership swindle."

"All right," said Mark grimly. "So I lose my licence and get jailed for a few years, that's better than immiolation."

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"Sorry, Mark, but it isn't as easy as that." Gale looked at the tips of his fingers. "I'm in a jam and I need help to get out of it. The only help I can trust is that of a man who is as deep in it as I am. That's you. I took the precaution of having a little conditioning done on me and, if you go under the lie-detector, then so will I." He smiled at Mark. "I will testify that we are equal partners in the killing and the machine will support my claim."

"Conditioning? That's illegal."

"Maybe it is, but that doesn't alter things." Gale stared directly at the lawyer. "My only chance to get an acquittal is to have a lawyer who is fighting as hard as he can to get it. No deals, no arrangements, no compromises. The only sort of man who will do that in the face of World Council pressure and public opinion is someone who has everything to gain and nothing to lose. In other words, Mark, if I get immiolation then so do you. If I get acquitted then you're in the clear with a big reputation and a pocket-full of money."

"An acquittal! But how?"

"That's up to you," said Gale easily. "You're a smart lawyer, Mark. Think about it for a while and maybe you'll get the idea. If you need any help call Central 234/543, you know who to ask for." Gale rose to his feet. "That's all, Mark. Just remember that whatever happens to me will happen to you too. See you in court."

Mark nodded, waiting until the turnkey had come and removed the prisoner.

He wished that he could feel as confident as Gale seemed to be.

VIII

Central 234/543 brought the flaxen-haired-man to the screen. Mark stared at him and tried to guess where Vernon fitted into the pattern. Conditioning took money, skill, and a practitioner who wasn't too particular about what he did. The penalties for illegal conditioning were severe and it took a lot of pursuasion to override them. "Mr. Engles!" Vernon smiled. "I had expected you to contact me earlier. You saw Mr. Hardin?"

"I did," said Mark grimly. "Just where do you come in on all this, Vernon?"

"Does that matter?" Vernon kept on smiling. "Let's just say that I'm interested in the case from a humanitarian point of view."

"Humanitarian or financial?"

"Both. You need money?"

"I will do. How much can I spend?"

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"That rather depends," said Vernon thoughtfully. "How much do you need?"

"Lots."

"For personal reasons or for benefit of the case?"

"Benefit of the case." Mark stared at the screen trying to see the background beyond the flaxen-haired man. All he could make out was a shapeless blur, Vernon had cut all lights except those essential to the scanners.

"If I may make a suggestion?" If Vernon had guessed why Mark had moved out of focus as he almost pressed his nose against the screen he made no sign of it. "Suppose you tell me what you need and I'll foot the bills. Or, better still, just tell me what you need and I'll obtain it." He hesitated "On what grounds do you propose to base your defence?"

"That's my business," said Mark curtly. Vernon shrugged.

"As you wish. But may I remind you that you cannot afford to make any mistakes? A man's life is in danger and perhaps it would be wise for you to discuss the case with someone else."

"You, for example?"

"Why not?"

"You said that you didn't know anything about the law," reminded Mark. "Anyway, I only called to find out how far I could go in the matter of expenses."

"As far as you like. Just tell me what you need and I'll obtain it for you." Vernon smiled. "Nothing illegal, of course."

"Naturally," said Mark sarcastically. "Nothing like a little conditioning for example?" He cut off before Vernon could answer.

Sam came in while he was still glaring at the screen. The little man looked seedier than ever and nursed a badly scratched face.

"I drew a bad one," he explained to Mark. "I figured I might scare up a little divorce evidence but the wife clawed me before I could put the proposition to her. Seems that she's known all along about her husband running around and doesn't care about it." He looked thoughtful. "Maybe she's cheating too? Perhaps her husband might be interested instead?"

"Maybe he'll break your jaw if you try it," said Mark savagely. He was in no mood to listen to the tribulations of the little man. Sam shrugged.

"Maybe. Say, Mark, about that case you gave me. I put it . . ."

"Don't tell me," said Mark quickly. "Just hold it until I ask for it." He didn't explain that what he didn't know he couldn't tell. Once under the lie-detector a man had to tell the truth as he

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knew it and Mark had the feeling that, just possibly, the brief case might be important. He looked at the small man.

"Got a job for you, Sam," he said curtly. "Can you find out who and what a man named Vernon is? I don't know where he lives but his videophone number is Central 234/543. Get me all the information on him you can. Right?"

"Money work," said Sam, "or just as a favour?"

"Money work."

"I'm on my way."

Mark sighed as the little man left the office. No matter what Sam found out it didn't alter the main problem. He had to secure an acquittal for a man who had deliberately shot down an alien before witnesses with all the weight of public and political opinion against him. He was still brooding about it when the door opened and a tall, thin, haughty-faced man entered and stared distastefully about him.

"Mr. Engles?"

"That's me." Mark glanced up and then leapt to his feet. He had only seen the visitor once before but every lawyer knew John Morgan, President of the Bar Commission, the one man whose single word could make or break a promising attorney. Hastily he dusted off a chair and placed it for his visitor.

"I'll come to the point, Mr. Engles," said Morgan stiffly. "I understand that you are shown as the lawyer defending Gale Hardin. Is that correct?"

"It is."

"I realise, of course, that every man is entitled to be defended no matter what his crime. I do not blame you for accepting the brief. However, as there is not the slightest possibility of you winning the case, and as the World Council are perturbed as to the possible repercussions in their dealings with the Lomians, I suggest that the sooner and cleaner the case is closed the better for all concerned." He twitched one tufted eyebrow. "You follow me?"

"I think so," said Mark. "You want me to make a deal with the prosecution."

"That will hardly be necessary," said Morgan stiffly. He seemed to be upset by the hint of collusion. "No, all that is necessary is for you to make your token defence, admit the crime, and appeal for mercy. The entire case should be over in an hour." He glared at Mark. "As you actually witnessed the murder you are liable to be called by the prosecution unless you can persuade your client to plead guilty."

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"Personal inconvenience should not condone unethical behaviour," said Mark piously. He glanced around the bleak dinginess of the office. "I had hoped that the case would give me some favourable publicity. I had intended to make it last at least two days."

"A quick conclusion will be appreciated," said Morgan. He rose to his feet. "In fact I have an opening in my own firm for a young attorney who can couple discretion with imagination." He paused. "On the other hand I should not wish to be in the shoes of anyone foolish enough to insist on beating his head against a wall. The case takes place in two days time, Mr. Engles. Need I say more?"

Mark shook his head.

IX

The entire compliment of Lomians attended the opening of the trial. They sat in silent dignity while scanning lenses swung towards them and cameras clicked and whirred from all sides. With the Lomians came the representatives from the World Council, the Senate, the Bar Commission and everyone who could somehow, someway, gain admission. The Judge, a noted humanitarian, took his seat and the Court got down to business.

"Case Hardin versus the State," droned the clerk into the recorder. "Case number 765/784 circa 2113. Charge of murder." He looked towards Gale. "Do you plead guilty or not guilty as charged?"

"Not guilty," said Gale cheerfully. He winked at Mark.

And the case was on.

The prosecution was efficient but then, as Mark reminded himself, it would have been hard for them to be anything else. They produced the gun, a small-calibre expanding bullet job, and gave evidence as to the cause of death. A doctor swore that he had removed the identified slug from the body. The police gave testimony as to the videophone call, the scene of the crime, the disposition of the body and the sets of fingerprints on the weapon. Finally, as if to make doubly certain, the prosecutor called Mark to the witness box.

"You are Mark Engles, Attorney-at-Law?"

"I am."

"You were present in your office at the stated date and time of the crime?"

"Objection," said Mark. "I object to the use of the word 'crime'."

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"Objection overruled," snapped the Judge. "Continue."

"Please answer my question," said the prosecutor. "Were you?"

"I was."

"Did you see the accused shoot the alien known as Riphan?"

"I did."

"Please describe to the Court exactly what took place."

"I have said that my client shot the alien," snapped Mark. "Isn't that enough?"

"Please describe to the Court exactly what took place." The prosecutor didn't smile but Mark could imagine what he felt like. As far as he was concerned the trial was a farce and should have been over long ago. Mark wondered if he really deserved the contempt in the other's eyes.

"The accused and myself were talking in my office," Mark said. "Riphan came in and joined the conversation. We talked a while and then Riphan made as if to leave. Gale, my client, called to him. Riphan stopped and the accused took a gun from his pocket and shot him. He threw the weapon towards me, I caught it, and then called the police."

Even as he spoke Mark knew what the prosecution were after. No possibility of self defence. No possibility of accident. Nothing but a premeditated, cold-blooded killing.

"Thank you, Mr. Englis. Was Riphan carrying any sort of a weapon? A cane, for example? A heavy book? Anything like that?"

"No, the hands were empty."

"Thank you. That will be all." The prosecutor turned towards the Judge. "That is the case for the prosecution, your Honour."

"Defence?" The Judge looked as though he had a bad taste in his mouth.

"The defence is simple, your Honour," said Mark, and wished that he could get rid of the butterflies in his stomach. "I move that the case be dismissed."

"Dismissed?" The Judge glared at the young lawyer. "On what grounds?"

"The charge was one of murder. My client has not committed murder. Therefore there is no case for him to answer."

"Ridiculous!" The Judge purpled beneath his wig. "You yourself have admitted that you saw the accused kill a man in cold blood. Are you trying to be humorous at the expense of the Court?"

"No, your Honour," said Mark patiently. "And I must correct your statement. I did not state that I had seen the accused shoot

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a man. I said that I had seen him shoot an alien." Mark took a deep breath. "According to statute 'murder' is defined as the unlawful killing of a human being with malice aforethought. Riphan was not a human being. Therefore my client cannot be charged with murder. On behalf of my client I wish to claim fifty thousand credits for wrongful arrest and imprisonment and that he be allowed to leave this court without let or hindrance."

The following silence was merely the lull before the storm.

"Smart," said Gale admiringly. "That bit about the fifty thousand, I mean. Think you'll get away with it?"

"No, but it will give them something to worry about." Mark sighed as he relaxed in his chair. The court had been adjourned following the bombshell and Mark guessed that the prosecution were busy trying to dig up some more evidence. He looked at Gale.

"You knew this all the time, didn't you?"

"Naturally." Gale chuckled. "You've got to be smart in this world, boy. I figured out that I could knock off one of the blue-skins and get away with it a long time ago. But I wanted to be paid for doing it and, more important, I wanted to make sure that I wouldn't be flung to the wolves. You filled the bill for the second part of the problem."

"And Trans-Solar the first?" Mark narrowed his eyes at the fat man's expression. "I had Vernon checked, it wasn't hard to find out who he worked for. What I want to know now is why he agreed to back you at all?"

"Maybe he liked the colour of my eyes," said Gale blandly.

"Or maybe they want the aliens to get so disgusted with us that they'll go back where they came from and ignore us from now on? Is that it?"

"I wouldn't know," said Gale easily. "Anyway, what's it to you? You'll get paid."

"Sure, I'll get paid and the whole planet will be flung back a thousand years," said Mark bitterly. Looking at the fat man Mark realised just how he had been used as a catspaw. The entire set-up had been designed by the entrepreneur for his own ends. The partnership swindle to involve the lawyer, the witnessed shooting and veiled threats to make him act as the defence, Vernon to supply the money and to stand by to give hints as to what line the defence should take. That hadn't been necessary, Mark had thought it out for himself, but he didn't feel proud of it.

"That case," said Gale suddenly. "The one I asked you to take care of for me, have you got it?"

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"I've got it."

"Better get it handy. I'll want it as soon as I get out of here."

"Is it that important?" Mark looked thoughtfully at the fat man. "That partnership contract you signed with Riphan. Where is it?"

"Safe. Why?"

"I want it."

"You'll get it," promised Gale. "After the trial."

"I want it now," snapped Mark. "If I don't get it I don't go back into court. And don't try to threaten me. Your defence will work just as well for me as it will for you. Well?"

For a moment Gale hesitated, then he shrugged. "All right, why not? You've played straight with me so far and I guess you can be trusted. I'll videophone one of my boys to pick it up. Take about an hour, that all right?"

"I want it before I go into Court."

"You'll get it," snapped Gale. For a moment he looked ugly. "And don't forget that case." He waddled towards a videophone booth as Mark left the room.

Outside Mark paused as John Morgan, thin nose held high, passed him as if he were dirt. Mark could sympathise with how the old man felt and, for a moment was tempted to follow him and explain. He fought down the impulse. Justice, to the President of the Bar Commission, was something too precious to be balanced on the meaning of a word. At least it was now, though in his younger days Mark suspected that he hadn't been above a little legal trickery himself. To hell with him.

A group of Lomians were talking to some reporters and Mark caught a snatch of what they were saying.

"... the Federation of course has laws designed to meet divergant life-forms. A defence such as we have seen here would not stand for one moment."

"If the defendant is acquitted what will you do?"

"Naturally such an acquittal will make a great difference to our regard for your race. After all, how would you feel if one of your number was slain in cold blood by one of us?"

And that, thought Mark grimly, was the sixty-four credit question.

X

The court convened and the procession of experts began. The prosecution had done a good job in the short time they had had at their disposal but, as one expert after the other rose to testify to

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the humanness of the Lomians, so one of Mark's shot him down.

Blood? It was blue, wasn't it? A lobster had blue blood, was a lobster human? Biped? An ape was biped, was an ape human? Talking? A parrot could talk, was a parrot human? Hands? A chimpanzee had hands, was a chimpanzee human? Ability to reason? A dog had that, was a dog human?

The prosecution didn't stand a chance.

Logic, thought Mark grimly. Cold, reasoned logic the only thing the evaluator accepted. Never mind the fact that the aliens belonged to a galactic wide Federation. Never mind that they had crossed light-years of emptiness to contact the human race and open vistas of trade and interchanged thought. They weren't

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human in the strict meaning of the word. They were easy game in a perpetual open season to any nut with a gun.

He stepped forward as the last of the witnesses left the stand.

"May it please the Court," he said formally. "Has the prosecution rested its case?"

"It has," growled the prosecutor. He was sweating and had long lost his bland calmness.

"Does the defence wish to finalise?" The Judge glanced hopelessly at the evaluator. It was getting late but no one thought of adjourning until the next day. Everyone wanted this thing settled. Mark smiled as he saw the direction of the Judge's glance.

"Yes, your Honour." He paused for effect. "It has been said that justice is not so much prosecuting the guilty as protecting the innocent. Conversely, should we protect the guilty and prosecute the innocent? Before the clerk closes the evaluator there is one point I would like to make clear. The defence, as you know, has rested on the fact that the slain creature was not a human being. It is a valid defence. It is valid, and will remain valid, unless it can be shown that the slayer of that creature both regarded and treated the creature as a man. I propose to prove that my client, Gale Hardin, did so consider his victim."

"One moment." The Judge leaned down from his bench. "Am I to understand that you are now acting for the prosecution?"

"If it please the Court, that is my intention."

"You can't do it," shouted Gale. Guards grabbed him as he lunged forward. "Mark, if you do it I'll take you with me. I swear it!"

"I realise," said Mark evenly, "that I am guilty of unethical behaviour. I also realise that I am in some personal danger. I ask the Court to remit my brief from the defendant."

"Request granted," said the Judge promptly. "Clerk, order a lawyer to represent the interests of the defendant." He smiled down at Mark. "You may proceed."

"I have in my hand a document inscribed and sworn by me in my capacity as an accredited witness for the administering of oaths." Mark handed the partnership contract to the prosecutor. "You will notice that the form is complete aside from the date. That is unimportant. Intent, in the eyes of the law, is as important as execution. I claim that the defendant freely, and without compulsion, entered into a partnership contract with the deceased." He paused. "I claim that he would not have done that unless he considered the deceased a man both as regards legal status and business standing."

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"Did you warn the defendant that the deceased had no legal status and so his contract would be invalid?" The Judge hadn't yet lost his smile.

"I did. His reply was that it didn't matter." Mark glanced at the prosecutor. "I need hardly emphasise the inference of this contract."

He was right. Once again the experts paraded but this time the answers were all on the other side.

Would a man enter into a partnership with a dog? An ape? A lobster? A chimpanzee? A parrot? Partnership supposed equal rights and equal responsibility. You couldn't have one without the other and, if you admitted equal rights, then killing such a partner was murder no matter how the dictionary defined the exact meaning of the word.

The lie detector wrapped it up in a nice, neat bundle. Gale, swearing threats and screaming at his guards, was carried away to wait for immiolation. Mark, his head still aching from the electrodes, waited for the Court to blast his career and send him to jail. The only bright spot he could see was that Gale had lied about his conditioning. He had told the truth, the whole truth, and nothing but the truth like it or not and, aside from the initial malpractice, Mark was in the clear.

He hoped that he could stay that way.

Morgan was very kind, he even smiled as Mark entered the room and the four Lomians didn't seem to hate him at all. The other individual in the room was a member of the World Council, Mark recognised him from the gilt insignia he wore on his collar. He started the proceedings.

"Mr. Engles, the Lomian delegation wish to express their appreciation for what you have done. I need hardly say that it can only match our own. That was a great thing you did out there."

"Great?" Mark shrugged. "I merely sold my client down the river, that's all."

"Justice triumphed," said Morgan sonorously. "My boy, I'm proud to call you a fellow member of a great profession."

"Wait a minute," said Mark. His head was aching so that he didn't seem to be able to think straight. "First you hint that unless I played it your way I would be made to suffer for it. Well, I didn't play it your way. I went all out for an acquittal and would have got one as easy as falling off a log."

"You would," said Morgan. "A very skilful defence indeed."

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"Right," said Mark. "So if that was good then what do you call it when I turn round and send my client to immiolation? Unethical, sure, but is that all you call it? What about integrity? What about my reputation? What about Gale? He's got a right to file a complaint against me and make it stick. If we're going to have justice let's have it all along the line. Fixing went out with the petrol engine."

"I will admit that what you did was not in the best tradition of law," said Morgan slowly. "But circumstances alter cases. Hardin was not a nice man, he was a criminal who tried to use you and abuse the law for personal gain. He was also a thief."

"A thief?"

"The Lomians inform me that certain papers were missing from Riphan's effects," said the man from the World Council. "Hardin took them, we discovered that through the lie-detector, but we don't know where they are." He looked at Mark. "You do."

"No I don't."

"You know how they can be obtained."

"Yes." Mark rubbed his aching head. Lie-detectors blanked out the conscious and operated direct from the subconscious. The man being questioned had no memory of the incident but, because of that, could offer no information. All answers were on the yes-no basis. They knew he had access to the papers but, as he didn't know himself where they were, he couldn't have told them.

"The Lomians want those papers," said the man from the World Council firmly. "You must give them up."

"Sure," said Mark. "I'll get them for you." He stared at the tips of his fingers. "No prosecution?"

"None."

"No blame for unethical behaviour or malpractice?"

"Certainly not," boomed Morgan. "You leave here without a stain on your character."

"Is that all?" Mark looked dubious. "I was hoping for big things from this case."

"All right, Engles," said the man from the World Council. "You know more than we thought. Those papers are dynamite. If you've examined them you know what I'm talking about and if you haven't then I'm not going to explain. What do you want?"

"Are the Lomians going to stay with us?"

"Yes. We signed an agreement to join the Federation an hour after the verdict." He looked grim. "It was that close. Had the verdict gone the other way we would have lost our only chance of joining."

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"Good." Mark paused. "As we can expect quite a lot of aliens in the next few years, not to speak of our own people travelling to the stars, I guess that there would be room for a lawyer who knows all the ropes." He smiled at the Lomians. "I want a full education in Federation Law."

"Is that all?" The World Councillor seemed relieved. "Hell, that's no trouble. You've already been invited to help draft the new legislature to deal with extra-solar affairs. When can we have the papers?"

"To-morrow morning." Mark glanced at his wrist watch. "I mean this morning. Say about ten at my office. That do you?"

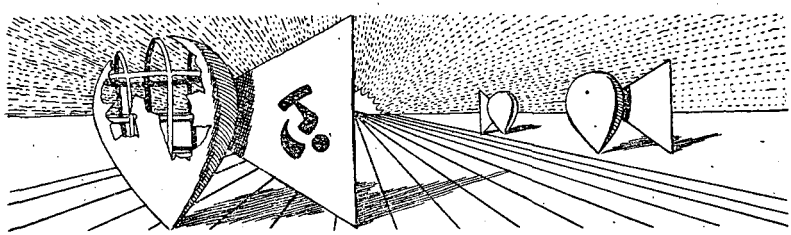
"It will do." The World Councillor seemed amused. "Incidentally, don't try to have them photostated. If you do you'll bleach them blank. The Lomians used a special ink which reverts when exposed to brilliant lighting." He smiled at Mark's expression. "If you should already have tried that, never mind, the blank paper will do. Until, ten then, Mr. Engles."

Mark nodded and walked out of the room. Vaguely he regretted a lost opportunity but, as he walked, the regret vanished.

Mark Engles, Attorney-at-Law sounded good. Mark Engles, Interstellar Counselor, sounded a lot better.

He could hardly wait to get into practice.

E. C. Tubb



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PUZZLE FOR SPACEMEN

A psychologist working in deep space would need to be an extremely astute individual—as well as playing at amateur detective he would need to apply his training in such a manner so that he got his own way.

By John Brunner

Illustrated by QUINN

The ship was crammed absolutely as full as it could be with the very hardest kind of vacuum. The air circulators churned and sucked dutifully at nothing; the last of the normally luxuriant air-renewing plants in their transparent compartment on the sunward side of the ship had long ago turned brown and dead, because there was neither carbon dioxide nor oxygen; the chemical purifiers which would have been removing anthropotoxins if those had not already been removed much more effectively along with the other gas in the ship sat quietly and waited.

The only thing which visibly marred the almost sterile cleanness of the cabin was a long brown smear reaching out over the control panels as if it were a signpost pointing to the airlock. Its broader end splayed back towards the pilot's chair.

The man from whom it had issued floated in his restraining harness, the ragged ends of his G-suit swimming about him like fronds of seaweed in still water—the fabric had burst like an over-inflated balloon when the

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compressed gas inside had found it was pushing against nothing. His head—what was left of it—lolled on one side.

A man who has been subjected to fourteen pounds' explosive decompression is not a pretty sight.

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Yannick Huyghens looked out at the cold stars and shivered. In the frame of the big port he could just see, if he craned his head close to the plastic, the dull red glow of the cooling jets on the ship which had just moved in to join the intricately interlinked combination of rotating parts which one day—one day—would be the completed Earth-Jupiter line-of-sight radio relay. At the moment it was a seemingly random collection of four ships—originally there had been only two—a myriad pieces of equipment, and ninety-three men, some of whose suit lights he could see out there as they went about their business of construction. But Yannick wasn't seeing all this to notice it; he could look beyond it and imagine the day when the chaos it now seemed was as perfect as the model which swung on its pivot on the corner of his desk—the culminating achievement of a life devoted to the business of building safe and useful additions to the sun's family of planets for the benefit of men.

"Watch it," said the public address speaker in the corner unemotionally, and the floor twisted under him. He yielded to the motion with automatic ease; it told him as eloquently as words that Louis Baron, his computerman, had completed his calculations and set up a stable relationship to include the ship which had recently arrived. Even as he watched, the dying glow of the tubes which he had just been able to see before, moved out of sight altogether, along with the distinctive irregular glinting of the holding chains.

There was a knock at the door, and without turning round, Yannick said, "Come in!"

It was Kurt Lochmann, his supply and time-and-movement superintendent, who entered. "Uh—I have the manifest of the cargo here, Yannick," he said.

"That's fine," said Yannick, still three years in the future and picturing the view from the supervisor's cabin in the completed station. "If you'll drop it on my desk, I'll be round to check it in a few minutes."

"I think I'd better do it," said Kurt. His Adam's apple bobbed up and down on his long, stringy neck and he swallowed hard.

Yannick turned away from the port and was about to demand why, when he saw that Kurt was not alone. In the doorway behind him stood a stranger. He wore an incongruous business suit of a smart blue shade, and carried a small attache case.

"Mr. Huyghens?" he said, coming forward and holding out his hand. "How do you do?"

Yannick ignored him. "All right, Kurt," he said. "Go check that cargo, after all. And make absolutely certain they've put in that batch of K69's they forgot last time. We could have been badly delayed by that."

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Kurt nodded and went out, and Yannick turned his attention to the visitor, eyeing his Earthside clothing with astonishment. "What can we do for you?" he demanded.

"I've come out in connection with the matter of that ship you located recently. I'm Hal Jennings. I'm the assistant personnel manager of Creswell and Palmer, the owners."

Yannick scowled. "I see," he said. "Sit down."

He cleared a thick pile of circuit diagrams and progress reports, a keyboard computer and a half-finished sandwich to the side of his desk, and sat down himself. Jennings laid his case in front of him and rubbed his hands together briskly, a gesture Yannick loathed. "Now, Mr. Huyghens," he said. "About this dead man you found—"

"Don't say that," Yannick interrupted in a brittle voice, "We prefer to use the term 'casualty.' You know him?"

"Yes. That's to say, we believe we've established his identity. We have over three thousand pilots in our employ, you realise, but only one of our ships should have been anywhere near this area if he was running to schedule. If we're correct, he would have been running in under no-load from Pluto, though to date we haven't been able to obtain direct confirmation from our agency there. Our 'fax equipment isn't up to it. We'll have confirmation from them next week." He opened his case and took out a photograph. "Is this the man?"

Yannick ignored the picture. "How should I know?" he said in a tired voice.

Jennings blinked. "Well, I naturally assumed you would have been to look at the corpse—the casualty, rather."

"I have better things to do, Mr. Jennings. We all have. The man who did enter the ship—the one whom I sent to investigate when the pilot failed to acknowledge our calls—only came back on duty this morning. The shock upset him badly. We spent fifteen tons of valuable fuel on bringing the ship into our system and forty minutes' computer work on re-balancing the system afterwards; on top of which, if you count the man who went inside, we've lost sixty man-hours. We're out here to build a radio relay station—not to amuse ourselves with the results of a blowout. You can't expect us to do your people's work as well as our own."

"I'd have thought that the death of a human being was sufficient to warrant some departure from schedule," Jennings remarked, blankly.

"I'm not interested in the death of one human being, Mr. Jennings. I'm interested in the sanity of ninety-three of them."

"I don't quite follow you."

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"'Out here sanity is at a premium. It's too valuable to be risked. With the comparative solidity of a planet under one's feet, even if the planet isn't Earth, one can stand the strain of a long construction job. Similarly, working in space where one can see the familiar face of either the Earth or the moon. Here there's nothing for millions of miles in all directions. Nerves get ragged, living over a literally bottomless pit. To force men already in the constant shadow of death by blowout to occupy their minds with the consequences of a singularly unpleasant case of it would be criminal idiocy in its own right. The effect of such exposure on the progress of the work would be incalculably bad." He stared piercingly at his visitor. "I should have thought that you, as a personnel man, would have at least a faint idea of the probable result."

"I have more than a faint idea, Mr. Huyghens," answered Jennings rather stiffly. "I must confess, though, that I have specialised in the forms of space neurosis which are altogether more short-term—those which affect pilots and others on interplanetary trips. I don't know much about men forced to spend years at a time in isolated conditions."

"I do," said Yannick pointedly. "You'll understand me now, at any rate, when I say that I want you to get your business over as soon as possible. The mere presence of that casualty, looking over our shoulders the whole time, is enough to give my people the willies. When we 'faxed down the news, I expected your firm to just send up a pilot and get the ship out of the way. If it hadn't been for Oscar arguing about it, I'd have given the fellow a decent cremation and ourselves a chance to forget the whole thing."

"Oscar?"

"My foreman electronicist."

Jennings nodded. He seemed to notice for the first time that he still held the photo of the dead pilot, and put it back in his case. "Tell me, Mr. Huyghens," he said musingly, "have you any special reason for finding the—casualty—unnerving?"

"None, other than that I'm determined to get this station built without interruptions. And the fact that anyone who's blown his top sufficiently to try and breathe vacuum is a messy sight."

"You assume it was suicide?" Jennings suggested after a moment.

Yannick shrugged. "Why not? Enough rocket jockeys have gone space-happy for it to be a reasonable explanation. It wasn't an accident; a meteor big enough to tear clear through the skin would leave a hole you could see, and no one's noticed a rip in the hull since we hung it up here.'"

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"I see." Jennings sat back and crossed his legs. "Excuse my asking silly questions, Mr. Huyghens, but this is in fact my first trip in space, aside from a few visits to the moon which were no more than glorified bus rides. I believe that the air lock of a ship can only be opened from inside. Isn't that so?"

"No," said Yannick. "You can open it from outside—obviously, or you couldn't get back in. What you're thinking of is the lunging-up switch, which opens both doors together. That's operated from the pilot's chair. It's normally only used on Earth."

"Thank you—that's what I meant." Jennings opened his case again and took out a sheet of graph paper with three lines—one red, one blue and one green—plotted across it. "You can read a psycho-profile?" he inquired, and Yannick nodded.

"Take a look at this one, then," said Jennings, passing it across the desk. "It's the last one we raised for Clore—I made it out myself, actually."

Yannick glanced cursorily at the paper; it was calibrated differently from those he was used to, but a check of the scale enabled him to follow it. He grunted.

"You'll see from that why I'm here," Jennings murmured.

"I see from this that there's something wrong with your methods of testing," contradicted Yannick. "According to this, Clore—you said Clore? Yes?—he was about as stable as Mother Earth."

"Exactly. That's why I was sent out, and not a pilot," said Jennings promptly. "As an engineer, Mr. Huyghens, you know just how costly interplanetary shipping space is. It cost my firm three thousand credits to get me here. If it hadn't been for that psycho-profile, we *would* just have breathed a silent sigh of relief and been glad enough to have got the ship back. Normally, if we lose a pilot we lose half a million credits' worth of space craft as well. It's a calculated risk, employing pilots who are nearing the limit of their margin of stability, and we seldom come out ahead on the deal. However, if we have here a pilot who was not within ten years of failing by any estimate we could make, by studying him—"

Yannick shuddered and turned his head.

"This is unique, Mr. Huyghens," pursued Jennings relentlessly. "Pluto to Earth under no-load is a long haul but a fast one, because of the additional reaction mass you carry instead of cargo. Clore should have taken it easily in his condition. If he did try to breathe space of his own accord, examination of the ship and in particular the log will point the way to further refinement of our testing methods."

Yannick fastened on an earlier remark of the other's. "Did you say you hadn't yet checked with Pluto whether it was Clore?" he asked.

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"That's right. If he's too badly damaged for visual identification—"

"Oh, hell!" said Yannick fervently. "Mr. Jennings, this is nothing personal, but I am going to get you and your casualty out of our system at the first possible moment. I agree that your investigation is justified—I realise the risk of mental strain, and anything that can be done to eliminate it has my support. But by the same token, I'm responsible for ninety-three men here and now, not for an unknown number of another firm's pilots in the indefinite future. Is that understood?"

"Perfectly," said Jennings stiffly.

"All right, then." Yannick reached for the desk phone. "Charlie, where's Oscar at the moment?"

A rather pleasant light tenor voice answered him. "Out on Fourteen. Why, do you want him?"

Yannick's eyes ran over the master construction plot on the far wall as he spoke. "Yes, plug him in, will you?"

"Right away." A pause, and then a slow, rather gruff voice replaced the other.

"What is it, Yannick?"

"Oscar, we have to check with Pluto about that casualty we found. His firm have sent up someone to look into it. Could you jimmy-rig Fourteen to do the job?"

"Not jimmy-rig it," said Oscar, but before Yannick's face could reflect his annoyance, went on, "the whole damned thing tested out without a fault ten minutes ago. I was just about to put the welders on connecting it and Thirteen. Louis is figuring the re-balance now. Can't it wait?"

"For preference not."

"Well, to raise Pluto is asking a hell of a lot from a single unit. It can be done, of course. I'll have to swing the antenna and tie in a couple of power cables . . . Say an hour?"

"That's excellent. What can you send?"

"What do you want to send? Six groups is about all I can guarantee will get through."

"I'll have the message phoned down to you in a moment," said Yannick. There was the sound of a heavy sigh, and the circuit went dead. Yannick turned back to find Jennings already writing out his message in a neat, legible script.

He waited till he had finished, then took the paper from him and looked at it, shaking his head.

"What's wrong?" inquired Jennings anxiously. "I shall need to know all that."

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"No 'fax, Mr. Jennings. What do you think this is—an Earth satellite? To raise Pluto with a single unit, we'll have to encode, compress the code into tenth-second blips, and repeat it fifty or a hundred times while we swing the beam across where we think Pluto is going to be when the message gets there. You Earth-bound desk pilots don't seem to have heard about relativity. Out here, we trip over it every time we fiddle with long-distance radio." He was leafing through the cypher manual as he spoke.

"Well, you're lucky. I can put your first eight words into one group—CJPUD means 'Request details and time of departure.' The name will have to go in clear, and so will the identity code of the ship, but I've a vague idea that there are some legal groups to cover the rest of it . . ." His voice tailed away as he swiftly turned pages.

"Put down WLMCY," said Jennings in a tight voice, and Yannick looked up in surprise.

"You know interplan code?"

"I've used it sometimes. That one stuck in my mind."

"What does it mean? I don't recognise it."

"It's probably never been used before, Mr. Huyghens. Largely because no one has ever been able to afford to use it. It happens to mean 'Information urgently required in course of investigation of unnatural death'." Dryly, he added, "Apparently the compilers of the manual thought there would be a police force in space to do the investigating."

Yannick frowned, but copied down the group. "With the pilot's name and the ship identification, plus our own tag, we get it into the six groups Oscar asked for." He reached for the phone again and dictated the message to Charlie for compression and recording preparatory to putting it on the beam.

"Now," said Jennings when he had finished, "I'd like to go out and look at the ship."

"Have you a strong stomach?" Yannick demanded.

"I don't know," Jennings answered seriously. "I've never seen a violent death."

Dear God! thought Yannick. And we—we walk and talk with it every day of our lives: waiting for the lifeline to fray through, the tank of propellant on a scooter to burst, the air-conditioning plants to blight or mutate into non-viable forms, the meteor to make a hole in a suit too big to slap a patch over—

He shut the thoughts deliberately out of his mind and got to his feet. "Very well, Mr. Jennings," he said heavily. "Come and see why we want to get rid of your property as soon as we can."

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The airlock was cramped with two of them in it, and they waited stiffly while the air around them—too precious to be simply wasted on the void—was sucked to a minimum by powerful vacuum pumps. At length though, that was over, and they turned to step out into nowhere.

Someone was waiting outside for them to leave, staring patiently at the red eye of the cycling lamp which warned that reclamation was in progress; so long as there was any pressure in the interior of the lock, the cycling lamp was always lit. Behind the waiting man a two-seat scooter—little more than a gyro, a drive unit and the seats and controls themselves—swung idly at the end of a holding chain.

"Through with that scooter?" Jennings jumped as Yannick's voice echoed in his helmet, and then realised that the remark had not been addressed to him. The unknown who was entering the ship lifted his right arm in confirmation, and Yannick gestured to his companion to take the rear seat. After checking the fuel level, he settled himself in the harness and looked around him at the complex web of structural members, both floating free on tie-lines and already interlocked into completed units, which formed the system. Judging the strength of his movement precisely, he gave a tug on the holding chain, and the scooter changed attitude abruptly. Jennings gasped, and the sound reverberated in his ears as the stars spun about them. When Yannick again caught at the chain to cast it loose, they were aligned towards a gap in the ring, beyond which a shiny hull faintly threw back the light of the multiple floods under which the crewmen were working.

Then there was a short flare from the rear-placed jet, and they were on their way.

Once the acceleration had ended, it seemed to Jennings that it was the rest of the swinging system which was passing them, while they floated in timeless and moveless space. During the three minutes which their brief voyage took, he gained a pretty clear idea of the layout. He was able to see the enormous ingenuity which insured the cohesion of the drifting sections; he watched the tiny distant suit lights of the welders and electricians manhandling girders and banks of radio equipment into place. Once he glanced back to the airlock which they had left a minute before, and saw that the cycling lamp had gone out.

For a while he was badly puzzled by a little group of tiny moving objects apparently glowing with their own light against the black background of another gap in the ring. Then there was a minuscule change of orbit, and he caught the brilliance of an almost edge-on view of one of the searchlights. Instantly the dancing motes took on their true perspective, and he realised that they were particles of meteoric dust. Growing more accustomed to the level of brightness, he saw that such motes surrounded all the lamps.

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" It's interesting," he said tentatively, " actually to *see* this interstellar dust which we're told is found in space."

" This is a bad patch," Yannick answered. " You know this station is in what they call a compromise orbit—an ellipse so designed that it's always in line-of-sight with both Earth and Jupiter when they're out of line with each other, transiting or eclipsed by the sun. It takes us across quite a lot of the solar system, but on the outer part of the swing we don't find so much of it. Here we're catching the backlog of the asteroid belt, which is full of the stuff. You've probably seen the belt which runs out around Earth itself—the one which produces the counterglow, you know."

" Yes, of course."

" Quiet a moment." Yannick spun the gyro, and the scooter's attitude changed again till its nose pointed slightly to one side of the airlock of the ship now looming up ahead of them; one nicely-judged burst from the jet, and the resultant of the two forces brought them with the gentlest of bumps up against the hull. Yannick clawed at the holding chain which hung on nothing beside him, and made fast.

" Some people," said Jennings with respect, " would have taken a dozen shots at that."

" I've had a little practice," answered Yannick dryly. He unclipped one of the powerful torches which served as headlights for the scooter, and used the holding chain to pull himself up to the lock.

Jennings followed him awkwardly, his arms and legs still tending to flail when they had nothing to give them purchase, and Yannick reached out to drag him in.

" Thanks," Jennings told him. " Hullo, what's happened here ?" His gloved hand reached out and tapped on the hull surrounding the cycling lamp; the red-tinted glass covering the filament had been shattered.

" Probably bumped a pebble," said Yannick indifferently. " They aren't very strong, those lamps." He tugged at the handle of the door. " Steady yourself. Here's your pilot."

With a final glance at the broken lamp, Jennings crowded with him into the narrow lock, but since they were entering rather than leaving they passed almost straight through. Yannick stepped out across the floor of the cabin.

" Look," he said, and swung the torch. Jennings froze.

Preserved by the unchanging vacuum, Clore was not nice to look at. His face was smothered and discoloured with blood which had burst from his nose, ears and the corners of his eyes and had not been whipped away by the blast of air towards the place where they now

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stood. His mouth was frozen open in a tortured shape which might have produced a scream had there been air for the sound to ride.

After a while Yannick said with desperate sarcasm, "Seen enough?" The hand holding the torch trembled a little.

"I'm afraid not," said Jennings. The sound of heavy swallowing came clearly over the phones to Yannick. "May I have the torch?"

Yannick gave it to him and turned away. For what seemed like an eternity he could hear nothing but the sound of Jennings's breathing, and the slight click whenever he moved, caused by the magnets on his boots meeting and parting with the floor. He felt a cold resentment against the other, compounded of disgust that he should be forced into the presence of death, dislike at Jennings himself—an Earth-bound desk pilot—and visions of the time wasted by himself and his team. This Earth-Jupiter relay was to be the crowning achievement of his life; he had grown too anxious for its progress to suffer interruptions gladly.

"All right," said the other, twenty minutes later. "I've seen enough now."

"Did you find what you were looking for?" said Yannick, hope edging his voice.

"I've found one or two things. The log is missing, for a start, but if Clore went off his head he might have thrown it into the disposal chute, in which case his next change of course would have lost it somewhere in space. The most interesting thing is that there were two men in the ship when it left Pluto."

"What? How do you know?"

"Oh, the air purifiers are set to handle two men's respiration. There's nothing odd about that—it would have been one of our other employees cadging a lift. When it's cheaper in terms of fuel and time to make a slight detour in an available ship than to lay on a flight direct, we arrange for him to be trans-shipped when he crosses some other orbit."

"Well, what happened to him?"

"Oh, he would have transferred, of course. Pluto will tell us if Clore was to pass within hailing distance of one of our other vessels. As a matter of fact, you could probably tell me, couldn't you?"

Glad of something to distract his mind from the horror in the pilot's chair, Yannick closed his eyes and mentally reviewed the current ephemeris. At length he announced, "The best bet is probably the Mars-Jupiter freight orbit. With this rash of building on Io there's a lot of traffic on that lane, and just now it cuts clear across the Pluto to Earth line."

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" Good. We haven't a regular Pluto to Mars service—you have to go via Earth. It would be worth trans-shipping him if he was making that journey. Could I contact our Mars office from here ?"

" Easily. I suppose you want to have this man interrogated about Clore's state of mind during the first part of the flight ?"

" Well, it's possible that the contrast between the company he enjoyed on the first leg and the isolation of the later part tipped the balance." Jennings handed back the torch. " Shall we go ?"

As they climbed back into the seats of the scooter, a voice suddenly filled both their helmets.

" Chief ? You there ?"

" Here I am, Charlie," said Yannick, pausing as he was about to clip the torch back into place on the scooter. " What is it ?"

" Oscar says to tell you that they sent that message to Pluto, and they're stripping down the boosters on Fourteen again."

" Thanks," said Yannick, and there was the click of the circuit being broken.

" Dismantling it ?" inquired Jennings.

" Yes, why not ?" Yannick jerked the scooter around again, looked for the main ship among the tangle of temporary planetoids, and jetted towards it. " Pluto's a working, ground-based installation. We don't have any trouble picking them up. Transmitting's different; we have to feed them a strong enough signal at the moment to be read in the eye of the sun."

There was a pause. Then Jennings said delicately, " Mr. Huyghens, how soon can I get in touch with Mars ?"

" The sooner the better, frankly," said Yannick wearily, and Jennings subsided in silence. He was not welcome; to these men, anyone prying into violent death was ghoulish, because it was always a dreaded and imminent fact to them. Death in space was usually swift and accountable; if there was ever a mystery, the black maw of the void swallowed it beyond the reach of man. This case was not unique in itself, though it might be in the end; in any case he would be able to count on only grudging help from Yannick and his team. Yet paradoxically, that was all to the good.

Yannick killed their forward velocity by adding a sideways component which brought them bumping up against the hull of the main ship, and caught at the chain to make it fast. " Come along, Mr. Jennings," he said. " You can call Mars now."

" Oh, not now," said Jennings with a faint and deliberate sneer. " Until I get an answer from Pluto I won't know what to ask them about."

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"Oh, *God*!" said Yannick from the bottom of his heart. "All right, Mr. Jennings. But oblige me by going and hiding in a corner. I mean don't get in anybody's way. You'll find an empty cabin on C deck you can use, and you can have lunch with us at one p.m. And so help me, if I catch you talking to *anybody* about the casualty, I'll shut you up on board that ship with it. Understood?"

"Of course," said Jennings acidly. For a moment Yannick had the impression that pure hatred was being transmitted over the helmet phones, and then he climbed into the airlock.

How, Yannick wondered sourly, could one man get to be so much of a nuisance in the space of a few short hours?

"Lord knows," said Kurt Lochmann from the other side of the desk, and Yannick realised with a start that he had spoken aloud. "I take it you're referring to that Earth-bound nosey-parker Jennings?"

"Who else? First the damned man loses me my lunch, because he insists on going out and poking around in that—ship. I had to go along because he'd never been in space before, and I wasn't going to risk letting a novice loose with a scooter in this system. When I got back I found a snarl in construction which took me three hours to clear. Then I had to put a communicator on to Pluto for him—more man-hours wasted. Now I've had to leave an operator I could use elsewhere on standby to pick up the answer. If he sticks around much longer I shall personally throw him off the ship." He crumpled a sheet of paper and threw it angrily into the disposal chute.

"I know," said Kurt sombrely. "The damned man doesn't *do* anything, but it's just his being here which is bad. I had a bad dream last night from it."

"Do this for me, will you, Kurt? As soon as you have a clerk available, make up a bill for services rendered and 'fax it back to Creswell and Palmer's head office on Earth. It'll make him unpopular at home and maybe they'll pull him out."

There was a knock at the door, and Yannick shouted for whoever it was to come in. The panel slid aside to reveal Louis Baron, the computerman, a thin man with inky fingers and a slide-rule in his pocket.

"What is it, Louis?" said Yannick.

"Thought you might care to see these figures," the newcomer told him. "I've been checking our orbit—the total orbit of the system, that is. Looks like we underestimated dust-drag a bit."

"Serious?"

"Lord, no!" said Louis, and Yannick relaxed. Anything which threatened the ultimate success of the station tended to make him terribly anxious. "Here are the figures."

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Yannick took the papers and scrutinised them. "Seems reasonable," he nodded. "How— ?"

The ring of the desk phone interrupted him, and he answered it with, "Huyghens."

"Charlie here, chief. I've had Pluto on the beam. Want the message ?"

"Surely." Yannick seized the pencil nearest him and scribbled down the groups. One of them puzzled him, but he saw after a moment that it was a name—Klaus—in clear. "Okay," he said. "I got it. Thanks."

Shutting off the phone, he turned to Kurt. "Go and rout out Jennings, will you ?" he requested. "Are they still within 'fax distance of Mars ?"

"Don't move out of range till next week," said Kurt, rising. "I'll send him straight round."

Louis nodded to Yannick, and the two departed together. Yannick bent to the cypher manual, and when Jennings came in a little later, he looked up and nodded.

"Here's your reply from Pluto," he said. "And they took long enough about it. Seems you were right about there being two men on board. Clore left Pluto with another of your employees, an agent called Klaus, who was trying to make Mars. They arranged with Jupiter to have one of the ships from Io diverted to cross orbits with Clore and take off his passenger."

"Sounds reasonable," nodded Jennings. "Is there more ?"

"I've got one last code group to work out. GVRMS," he muttered, turning pages.

"'Psychologically fit for spatial duties'," said Jennings promptly. "I've sent that one myself often enough."

"Sometimes wrongly," suggested Yannick unpleasantly.

"Oh, no," said Jennings quietly. "Always rightly."

The impudence of the man, thought Yannick wearily. With a tribute to his incompetence out there now, he can still make a ridiculous statement like that.

"All right," he said at length. "You can go around to the communications blister and get the operator to contact your Mars office. *Please* be as quick as you can; we need our channels for other things."

Jennings inclined his head and took the interpreted message, looking it over. "One thing, if you can spare a moment, Mr. Huyghens," he said. "How exactly does that red light alongside the airlock of a spaceship work ?"

"A cycling lamp ?" said Yannick. "Oh. If there's pressure in the lock—that is, between the two doors—it closes a circuit and switches

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on the light. It's just to warn anyone trying to enter from outside that the lock is occupied. It doesn't burn all the time—the closing of the inner door starts the pumps automatically, so that if someone comes in from outside he doesn't waste air."

"How far away could you see it?"

"Lord knows. A hundred miles if you were looking in the right direction, possibly." Yannick spoke as one explaining two plus two to a retarded child.

"It's kind of you to make it so clear," said Jennings. Yannick looked up sharply, wondering if he really had detected sarcasm in his voice. "How close would two ships approach when they had to trans-ship a passenger?"

"Their orbits would be pre-calculated by mutual agreement at the points of departure, and when they met, depending on the accuracy of the plotting, they would either sling across a line or—more likely—the bigger of the ships would send across a crewman with a scooter to pick the passenger up."

"Thank you," said Jennings again. He gathered up the message draft and went out.

After he had gone, Yannick turned sourly back to his work. What with waiting for Pluto's reply all through the past 'night,' he was falling behind. He set to determinedly and sorted out a progress report which should have gone off yesterday. He dictated a stinging account of the reasons for the delay—Jennings—and had just finished the stuff left over from yesterday when there was a hesitant knock at the door again, and Jennings returned.

"Well?" said Yannick. "All fixed? When are you moving out?"

Jennings sat down and adjusted the legs of his trousers delicately. "It looks as if you are going to be stuck with me for some time, Mr. Huyghens," he said. "In fact, not only me, but probably several other people, including the government's investigators. They won't take this lightly."

"Take what lightly?"

"Clore was murdered."

The silence remained for a long time, as solid and as heavy as if it were a physical thing. At last Yannick broke it, his voice sounding thin and far away.

"What are you talking about?" he said incredulously.

"I've been in touch with the duty shipmaster at our Sun Lake Port office on Mars. He confirmed that Klaus did leave Pluto with Clore, and was correctly trans-shipped—by scooter—to one of our heavy

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freighters from Io to Mars, the *Geertruida*. But because I happened to trust my psycho-profile of Clore, I asked for Klaus's confidential index. It turned out to be 18VY. Do you know what that is ?"

Yannick shook his head dumbly.

" Potential homicidal instability. Triggered by a subconscious desire to kill without suffering the consequences. So long as they're surrounded by many people, they are quite safe. The classic cases are mostly from Earth during the pioneering stages; men without previous criminal records would go out into the wilderness with one companion and return and report him dead of a shooting accident or something similar. Since they *were* mostly unprovable, they frequently went unpunished. The classic case, which gives its name to the condition, is Packer's, back in 1874 in Utah. In that case it was combined with cannibalism."

Yannick's face twisted with nausea, but Jennings continued in the same level voice, " So you see, Mr. Huyghens, there will be an inquiry."

Visions of the entire job held up while strangers prowled and probed around the station filled Yannick's mind. He said, " Not while I'm in charge of this job, Jennings. If you want your pilot, take him out of here and don't come back. I don't care if Clore *was* murdered ! I'm not going to stand for a bunch of ghouls breathing down our necks and flourishing that blowout in front of us for the next year or two."

" I'm sorry, Mr. Huyghens." Jennings was inexorable. " I know a little about the laws relating to criminal insanity. There has never before been a murder in space, except for those caused by maniacs who later committed suicide. Most deaths off the surface of a planet occur through accident or, more rarely, nervous breakdown. I think you'll find that the government will requisition accommodation here, for a start, rather than send up separate ships. Of course, my firm will be glad to give them space on the regular transports with which we service you—the good name of the company is at stake. I don't know who let this man Klaus slip out aboard an empty ship instead of riding a crewed freighter, but he will have considerable trouble to face—"

Yannick buried his head in his hands. He considered simply casting loose the ship and the dead man and sending it off into another orbit, and then dismissed it as hopeless. " Is there nothing we can do ?" he said.

" Only one thing, Mr. Huyghens. Prove beyond doubt that this was in fact a murder."

Yannick stared. " You mean you aren't certain ?" he demanded in a shaking voice.

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" So far, we only have Klaus's known instability to guide us," said Jennings, leaning back in his chair. " Taken together with the fact that Clore was shown to be incapable of resorting to suicide at his last mental check-up, it's not proof—but it's grounds for investigation. As a psychologist, of course, *I'm* certain it was murder."

Yannick grunted and did not answer.

" Look, Huyghens," said Jennings abruptly, " I know how much this is going to affect you. The prejudice against coming into contact with violent death is an old one, especially when people are in daily dread of it happening to themselves. I'm from Earth, where we take it differently, and can't really appreciate it—"

" Putting a label on it doesn't make it any easier to live with," said Yannick.

" Exactly. Now there'll be another message in from our Mars office shortly—I've asked your operator to keep an eye out for it, and I hope you don't mind. So far I can see one possibility that may prove murder. I'm no detective, of course, but I think you'd rather settle the matter right away. It's the question of the cycling lamp. I asked our Mars office to find out whether the crewman who went across to collect Klaus from the *Geertruida* noticed if the cycling lamp was on when he passed through the airlock."

Yannick turned worried eyes on him. " I wondered why you were asking about that damned thing," he muttered. " But what does it prove? If the crewman noticed that it wasn't lit, Klaus need only say that it was broken, and so it is—you've seen it yourself."

" But it isn't broken," said Jennings gently.

" Damnation, man ! I saw it myself—"

" And leapt to the wrong conclusion. I looked at it more closely, because, as I told you, this is my first time in space and I'm fascinated by the working of spaceships. At first I was as ready as you to accept it as out of order. But tell me, what purpose does the glass around the filament serve?"

Yannick sat up, sudden hope stirring in his mind. " To keep the vacuum !" he said.

" To keep the vacuum. The *filament* of the cycling bulb isn't broken, only the glass. It should have functioned as well in space without the glass as it did with. I take it that the only reason for having glass round it in space is the fragility of the wire. If we can obtain confirmation from the man who transferred Klaus to the *Geertruida* that the lamp did not light when he left the airlock, we have proof that the ship was already drained of air. In fact, that Klaus committed murder."

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He rose to his feet. " Now all we have to do is to wait for the ship-master on Mars to report. I hope for your sake, Mr. Huyghens, that the crewman kept his eyes open. I mean to find conclusive evidence of the crime if it's the last thing I do."

Looking at him, Yannick made a tentative admission to himself that perhaps Jennings was right, after all, perhaps the death of a man, on the strength of a couple of psychologists' reports, could be made into a justification for the holding up of his job, and the teetering of nearly a hundred men on the hair-line edge of sanity.

But he had never known Clore; his death meant nothing to a man who had worked space since the days when if you came back alive you were one of the lucky few. He knew this station, though, better than he knew himself. In a sense, it *was* himself—the product of his mind at least. It was always going to be more important to him.

He said nothing, and after hesitating a moment Jennings turned away and went out, carefully sliding the door to behind him.

God damn it ! thought Yannick, angrily slapping the top of a pile of schematics. Would this Martian agency of Jennings's *never* find that crewman ?

It was two days now since they reported that he had gone off on leave immediately on landing, and they would try to trace him. Even among the population of Mars—second now to Earth—it should not be so hard to find one man and ask him one simple question.

He hoped devoutly that the answer was going to be good.

The door opened without ceremony, and he tried to exchange the haggard look on his face for a smile to greet his visitor, but he failed. Instead he said, " Hullo, doc."

Dr. Meadows, who combined the functions of medical and mental officer, dietician and ecologist for the system, nodded his grey head and sat down. Without preamble, as if following up a previous train of thought, he remarked, " You don't look so good yourself, Yannick."

" Have I any reason to be ? What's the visit for—about this man who went catatonic yesterday, I suppose ?"

" Yes, of course." The doctor shrugged. " He'll have to go back to Earth at the first opportunity. And I fear there may be others later."

" It's that—casualty, I suppose."

" Definitely. Men in isolated conditions have always hated the presence of death—it's a basic prejudice which we shall probably never eliminate altogether. I've been reading up on it; it seems that even ocean-going sailors used to refuse to ship with a corpse. So long as it was just *there*, it could be tolerated; it could even be forgotten, for a while. If I'd been notified why Jennings was coming here, I would

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have advised you to keep his mission secret and give him a cover-up. As it is, everybody in the system knows who he is and why he's here, and the mere sight of him acts as a trigger."

"There are going to be a hell of a lot more triggers in a short time, unless we get proof of his crazy theory," said Yannick gloomily. "Doc, has he discussed it with you? Is he justified in suspecting murder?"

Meadows shook his head. "I don't know. But he's a good psychologist—he has to be, to hold down that post. I'd say that if his data are right, he's right."

Yannick jerked his thumb at the pile of papers on the desk. "I've got stuff here I should have dealt with three days ago," he said. "It's getting me down, too. You know what this job means to me, doc, don't you?"

Soberly, Meadows agreed that he did. "I can understand how holding it up affects you. Frankly—if you'll pardon what you might call doctor's privilege—I think it means entirely *too* much to you."

"Maybe it does," said Yannick tiredly. "Maybe it does. But I wouldn't change it if I could. Doc, suppose that we can't prove that the cycling lamp didn't light—that there was no pressure in the ship when Klaus left it? Is there another way to fix the time of the man's death?"

"State of the body? The vacuum will have preserved it. Consumption of food? People's appetites under no gravity vary from day to day—I know that from hard experience in trying to keep track of the eating habits right here. The log, Jennings tells me, is missing, which could equally well be due to Klaus covering his tracks or to a fit of madness by Clore, at least in the eyes of the law. Er—how about deviations from orbit—say failure to fire a correcting blast, or something?"

Yannick shook his head. "I've thought of that. When a long-run and a short-run ship cross orbits and want to match, the short-run ship, in this case the *Geertruida*, does the manoeuvring, because of the fuel expenditure. I already know that the plotting was good enough for them to avoid making any corrections—they matched to within twenty miles."

"Have you been giving a lot of thought to this?" asked Meadows. "It sounds like it."

Yannick gave a short, humourless laugh. "Yes, doc, I have. It's stupid, isn't it? I'm not interested in the blasted man himself, it's just that I'm so worried in case interference seriously hinders the job, I'm being compelled to look for every possible loophole. If I could just lay my hands on one item of proof that would get Jennings out of my hair, I'd be happy."

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"Keep looking," said Meadows, rising. "I'll be getting along. See you at lunch."

For a long time Yannick remained looking at the spot where Meadows had been sitting. Just as he roused himself to get back to work, the phone interrupted him. He said, "Huyghens."

"Charlie, chief. We've had Mars on the beam for Jennings—he's coming round to see you now. I thought you might want to know before he hits you that they've found this crewman from the *Geertruida*, and he can't remember noticing whether the cycling lamp of Clore's ship was on or not. They say he just can't be sure."

Yannick's heart sank. "Thanks," he managed to say, and rang off. Looking up at Jennings as he came in through the door, he said, "I hope you're satisfied."

The bitterness in his tone seemed lost on Jennings, who shrugged. "It was just bad luck," he said. "Well, there isn't anything else we can do from this end, is there? I just came along to tell you I'm going to notify our head office on Earth and have the investigation proper commenced. I thought you'd want to know."

Can the man really be as thick-skinned as that? Yannick wondered in dumb incredulity as he watched the door close behind Jennings again.

He cursed, roundly and at length, the man who had put Klaus on board a no-load ship with one companion, instead of aboard a crewed ship where he would have been safe. He almost wished the man would repeat his murderous performance in a place where there were other people to tell the tale, but of course the very nature of his aberration made that impossible. Surely there must be *some* way to avoid the prospect of a bunch of grave-robbers coming out to trample over the horrid scene, to present its memory afresh to each of his already unnerved men every way they turned—

Try as he would, the problem which had defeated him a dozen times defeated him again; perhaps his very desperation was blinding him.

He looked at the model of the completed station on the corner of the desk. It would be much longer now before he saw the reality. Men would break down; replacements would have to be brought in and in their turn they would break down. He himself . . .

Picturing himself being taken away from the task which meant so much to him, he shuddered. *That* Jennings could do to him.

Sickly, he turned over the papers before him at random, finding things he had been given the day Jennings arrived and still hadn't attended to. What was this, now? Louis's figures on dust-drag. Never mind them, they could wait—

Dust!

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He reached for the phone, his hand trembling with excitement. "Get me Louis," he said tensely. "Hurry!"

If only it were possible! But it must be.

The glass round an electric lamp served to preserve the vacuum; vacuum means 'the empty thing'—and space is not empty. Weiszacker and Gamow had shown how planets could be formed from the inchoate dust of the Beginning, but they had not taken up all of it. Some of it remained to give Earth its counterglow; some of it was dancing out there in the light of the searchlights. A little of that would have entered Clore's ship, first when the discovery of his death was made, and then once more on the visit of Jennings and himself to the vessel—but only a trace, since at no time had both doors been opened. If the ship had been left open to space by Klaus long enough to have drained away all its air, it would have swept up a little of the dust of the place it was passing. A little. It would have to be *enough*.

His mind filled with a ghastly vision of Klaus, safe in his spacesuit (he wondered what ingenious, devious excuse he had invented for putting it on), perhaps grinning in anticipation, slamming down the release of the airlock and blowing the air into space, while Clore, uttering that scream which was now frozen on his face, stretched out a frantic arm to stop him—and failed.

Suddenly he hated Klaus even more than he hated Jennings.

Then he would have stayed with the body—for hours? Days? The last shreds of air would have drifted out of the lock, and perhaps dust would have drifted in—it had to have drifted in. Until Klaus went outside when the proximity alarm light warned him of the nearness of the *Geertruida*, and closed the lock behind him from outside. He was safe; pilots had blown their air through insanity often enough before, and he had only to say that Clore was acting strangely when he left. After all, he had broken the cycling lamp on the lock, so no one could have told from the *Geertruida* that there was already no air in the hull. And with the log gone—easily done by the failing Clore later on—there was nothing to show when he died.

He realised that Louis had been shouting at him for ten seconds, demanding to know what he wanted, and he said, "Louis do you have data on density and composition of the dust all along our orbit?"

"Of course," said Louis, faintly surprised.

"Could you tell the difference between a sample of this dust we're passing through now and that from somewhere between Pluto and the Mars-Jupiter orbit at the moment?"

"Heavens, yes! That one would be quite easy. You see, the orbit of Jupiter is pretty well swept clear by the mass of the planet and the Trojan asteroids. Inside the orbit the dust is mostly heavy stuff—

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what the inner planets are made of, and some of the asteroids. Outside Jupiter, the composition is very markedly different, it's similar to the giant planets themselves, fragments of ice, molecules of hydrogen, frozen ammonia and so on. The orbit of Jupiter almost forms an exact dividing line."

"Could you test the dust in that ship"—he didn't need to refer more directly to Clore's vessel—"and say whether the locks were opened to space inside or outside the orbit of Jupiter?"

Louis's voice reflected as much jubilation as Yannick himself felt. "I don't know, damn it," he said huskily. "But let's go and try."

"Mr. Huyghens, I'm afraid I have rather a serious admission to make," said Jennings, looking up with a smile from the report of Louis's spot analysis which he had in his lap. "You've been thinking of me as quite insensitive to your difficulties, and to the fact that you wanted to get this work ahead as fast as possible. Believe me, I wasn't. But I was trying to make things worse for you."

Yannick was temporarily speechless, and Jennings hurried on before he could master himself. "I've also lied to you regarding the imminence of an investigation. If I had gone to your communications room and sent a 'fax message to the police on Earth, they wouldn't have come out millions of miles. I had no concrete evidence to offer them; psychological tests have failed before, and aren't conclusive. If I'd notified my own firm, they would conveniently have overlooked it. The most that would have happened would have been the dismissal of the man on Pluto who was responsible for letting Klaus travel with Clore. That way, they stood to gain by the cost of one ship which could have been written off otherwise. As it is, Clore's dependants will sue my firm for negligence, and probably cost them a million.

"But I raised that profile of Clore myself. I *knew*—more certainly than I could put on paper—that he hadn't killed himself. I came out here fully expecting that I might have made a mistake; I was prepared to back down, in spite of that. The discovery that he had had a companion reassured me. For a while, with the discovery that the cycling lamp wasn't really broken, I hoped I could show proof. When that failed, I knew there was only one chance. As I told you, this is my first trip into space—I simply didn't *look* at things the way a man who had spent years in space could do. Obviously, you were the man to supply the answer—it was a puzzle for spacemen, not a 'desk pilot.'

"Since you were rigidly opposed either to wasting time from your project or probing into Clore's death, the only way I could elicit your aid was to point out that it was going to be worse for you if you didn't find that proof than if you did."

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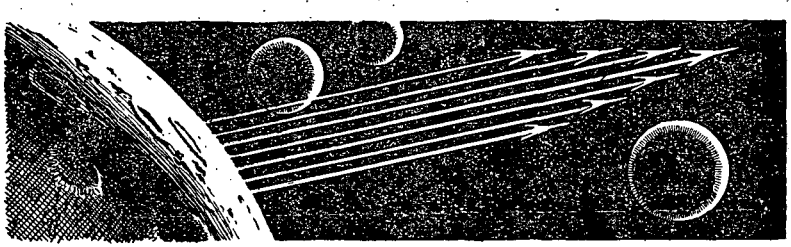
He looked squarely at Yannick. "I've broken one of the major rules by which I as a psychologist should live. I temporarily but knowingly endangered the sanity of members of your team. But I've adhered to a bigger and better precept. If I had consented to forget about Klaus, doubt would have been cast on the success of psychological testing—and I'm a psychologist. Space is too big and too menacing for the consequences of any mistake to go unremedied. If we can dispose of Klaus—and we can—we've added another piece of the jigsaw. The complete picture is perfectly safe space travel."

Yannick's sullen expression changed slowly, unwillingly—but irresistibly—into a smile. "You're a very clever man, Jennings," he said grudgingly. "You're probably too clever for your own good."

"I am," said Jennings levelly. "I've probably cost my firm a million credits in damages and incalculable goodwill. I've done myself out of my job, among other things. Yes, I'm too clever for my own good.

"But not, I like to think, for other people's good."

John Brunner



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PANEL GAME

Brian Aldiss's latest story comes at a particularly appropriate time—the advent of Christmas and commercial television in Great Britain. As such it links the two occasions together in a very neat humourous story which could possibly be prophetic!

By Brian W. Aldiss

It was Christmas. Snow fell by courtesy of Home-Count Climatic.

Rick Sheridan came off shift early, flying his helic deftly through the white clouds, and keeping by long custom between the altitude levels prescribed for his particular consumer-class. As far as he might be said to have a character, his character was cheerful. He exhibited this cheerfulness now by whistling.

The sound filled the little cockpit, competing with the bope music issuing from the 3-inch screen telly strapped on his wrist.

Christmas! It was proverbially the time of festivity and maximum consumption. It was a period when everyone would be happy—except, possibly, he warned himself, his wife, Neata. Her moodiness had become trying of late. The mere thought of it knocked his whistle off key.

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For the difficult business of landing, Rick switched onto auto. This luxury had been fitted by Happy Hover Ltd. only two months ago. With the faintest of sighs, the helic leafed down, below the clouds, below the aerial levels, below the roof tops, and squatted in the Sheridan back garden.

The garden was a large one, as gardens went, ten feet by sixteen, and covered by neo-concrete. Rick jumped out and stretched himself. Although he was all of twenty-eight, he suddenly felt young and healthy again. Appetite stirred sluttishly in his stomach.

" Oh, for a bowl of tasty, toothable Cob Corners !" he cried exultantly, and bounded for the back door.

He was high enough up the consumer hierarchy to own a magnificent two-room dwelling. Walking through the Disposing room, he entered the Gazing room and called " Neata !"

She was sitting quietly at the Relaxtable, laboriously mending a little labour-saving device, her fair head bent in concentration. Her smile of welcome formed easily and naturally round her new teeth, and she jumped up, throwing her arms round him—carefully, so as not to crumple his teddy tie.

" Ricky, darling, you're early !" she exclaimed.

" I hit my quota ahead of schedule," he explained proudly. "Thanks to Howlett's."

Their only child, Goya, jumped up and ran to greet her daddy. She managed to do it backwards, thus keeping her eyes fixed on the wall screens, where Sobold the Soap King was facing three dirty-looking criminals single-handed.

Rick's eyes glistened behind their contact lenses. He reflected how affectionate the child was for a three-year old, but something in the little girl's actions must have displeased her mother, for Neata said irritably, " Why don't you welcome your father properly ?"

" Wanna see old Sobold slosh the slashers," Goya said defiantly.

" You're old enough to guess what will happen,' Neata said crossly. " He'll catch them and make them all wash in that creamy, dreamy lather that only Little Britches Soap provides."

"Don't get angry with her," Rick said. "Remember, it's Christmas."

He took Goya on his knee, and settled down with her to watch Sobold, his hunger forgotten. The wall-screens filled two walls. Before the end of next year, if he worked as well as he was working now, they might be able to afford a third screen. And one day . . . he blushed with excitement at the thought of being surrounded by an image in quadruplicate on all four walls.

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A flicker of interference burst over the bright screens. Rick tutted with annoyance; the terrific technical accomplishment of telly was something upon which every civilized consumer prided himself, but it was nevertheless obvious that just lately there had been more misting than usual on the screens. Rick found himself recalling the rumours, dim and evasive, which he heard while at work; rumours of a vile movement to overthrow the present happy regime, of determined men with new weapons at their command.

Dismissing the idea irritably, he turned full attention onto the screens. Justice and cleanliness having overtaken Sobold's opponents, the next quarter of an hour was to be devoted to " Mr. Dial's Dairy," a comic serial lampooning twentieth century farm life, presented by the makers of Grinbaum's Meat Bars.

" Time for bed, Goya," Neata declared, and despite the young lady's protests she was whisked into the Disposing room for an encounter with Little Britches, Ardentifrice and Juxon's (' Nun-better') Drying Powder. Rick seized this opportunity while he was alone to spend ten minutes looking into his Pornograph, but his attention was recalled by a jolly announcer in the Grinbaum uniform calling out, " Well, customers, there we have to leave Mr. Dial for now. Is his prize cow really going to calve ? Will Sally Hobkin get that big kiss she deserves ? Your guess is as good as mine, suckers. One thing *everybody* is sure about is the goodness, the sheer brothy, spothy goodness, of Grinbaum's Meat Bars. A whole carcass goes into each of those chewy little cubes."

And then leaning, as it seemed, almost out of the screen, the announcer suddenly bellowed harshly, " Have you bought *your* quota of Grinbaum's Meat Bars today, Sheridan ?"

Cut. Screen blank. Ten seconds till next programme.

" He certainly puts that over well," Rick gasped proudly, passing a hand over his brow. " It always makes me jump."

" It makes me jump too," said Neata flatly, leading a night-dressed Goya into the room.

This device whereby consumers could be individually named was the latest, and possibly cleverest, accomplishment of telly. The announcer had actually named no names; instead at the correct moment, a signal transmitted from the studio activated a circuit at the receiving end which, in every individual home, promptly bellowed out the surname of the head consumer of the family.

Neata pressed the Relaxtable and a section of it sprang into a bed. Goya was put in, and given her cup of steaming, happy-dreaming Howlett's. She had hardly drunk the last mouthful before she sank down on the pillow, yawning.

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" Sleep well !" Neata said gently, pressing the child's ear plugs into place. She felt tired herself, she hardly knew why. It would be a relief when her turn came for Howlett's and Payne's Painless Plugs.

There was no switching the screens off and now that telly provided a twenty-four hour service, the aids to sleep were a necessity.

" This is Green Star, B channel," announced the screens. " The Dewlap Chair Hour ! ! ! "

" Must we watch this ?" Neata asked, as three dancing, screaming nudes burst into view, legs waving, bosoms bouncing.

" We could try Green Star A."

Green Star A had a play, which had already begun. They tried Green Star C, but that had a travel programme on, and Rick was bored by other countries—and a little afraid of them. They turned back to the Dewlap Hour, and gradually relaxed into semi-mindlessness.

There were three other coloured star systems, each with three channels, at their disposal, theoretically at least. But Green Star was the official consumer system for their consumer-class; obviously it would be wasteful for the Sheridans to watch White Star, which advertised commodities they could not afford, such as shower-purges, stratostruts, tellyslides and bingoproofs.

If they did watch White Star, there was, unfortunately, no guarantee that telly was not watching them. For since the installation of ' wave-bounce.' some ten years ago, every wall screen was a reciprocal—which meant, in plain language, that every viewer could be viewed from telly. This innovation was the source of some of the very best programmes, for viewers could sit and watch themselves viewing telly.

Dewlap was showing one of the numerous and ever-popular panel games. Three blindfold men and a blindfold woman were being passed patent custards, cake-mixes and detergents; they had to distinguish between the different commodities by taste alone. A compere in shirt sleeves awarded blows over the head for incorrect guesses.

Just to-night—perhaps because it was Christmas—the sight of Gilbert Lardner having his head tapped failed to enthrall Rick. He began to walk about the Gazing room, quite an easy matter since, except for the Relaxtable in which Goya lay drugged there was a complete absence of furniture.

Catching Neata's curious gaze upon him, Rick moved out into the garden. It was not fair to distract her from her viewing.

The snow still fell, still by courtesy of Home-Count Climatic. He did not feel the cool night air, snug in his Moxon's Mock-wool. Absently, he ran his hand over the helic, its blunt vanes, its atomic motor, its telly supressor, its wheels. All maintenance, of course, was done by the helic drome: there was nothing he could fiddle with. Indeed, there was nothing he could do at all.

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Like a sensible fellow, like all his sensible neighbours—whom he had hardly so much as seen—he went back indoors and sat before the screens.

Five minutes later came the unprecedented knock at the door.

The shortage of arable land in England, acute in the twentieth century, became critical in the twenty-first. Mankind's way of reproducing himself being what it is, the more houses that were erected on the dwindling acres, the more houses were needed. These two problems, which were really but facets of one problem, were solved dramatically and unexpectedly. After telly's twenty-four hour services were introduced, it was realised by those who had the interests of the nation at heart (a phrase denoting those who were paid from public taxes) that nine-tenths of the people needed neither windows nor friends: telly was all in all to them.

A house without windows can be built in any surroundings. It can be built in rows of hundreds or blocks of thousands. Nor need roads be a hindrance to this agglomeration: an airborn population needs no roads.

A house without friends is freed from ostentation. There is no longer any urge to keep up with the Jones's, or whoever may come in. One needs, in fact, only two rooms: a room in which to watch the screens, and a room in which to store the Meat Bars and other items which the screens hypnotise one into buying.

So telly changed the face of England almost overnight. The Sheridan house, like a great many others, was in the midst of a nest of houses stretching for a mile or more in all directions; it could be reached only by something small enough to alight in the garden.

So for many reasons the knock on the door was very much a surprise.

"Whoever can it *be*?" asked Rick uneasily.

"I don't know," Neata said. She too had heard rumours of a subversive movement; a momentary—and not unpleasing—vision attended her of two masked men coming in and smashing the wall screens. But of course masked men would not bother to knock.

"Perhaps it's somebody from Grinbaum's Meat Bars," suggested Rick. "I forgot to buy any today."

"Don't be silly, Rick," his wife said impatiently. "You know their factory must be purely automatic. Go and *see* who it is."

That was something he had not thought of. You had to hand it to women . . . He got up and went reluctantly to open the door, smoothing his hair and his tie on the way.

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A solid-looking individual stood in the drifting snow. His helic was parked against Rick's. He wore some sort of a cloak over his mock-wool: obviously, he was of a higher consumer class than the Sheridans.

"Er . . ." said Rick.

"May I come in?" asked the stranger in the sort of voice always hailed on the screens as resonant. "I'm an escaped criminal."

"Er . . ."

"I'm not dangerous. Don't be alarmed."

"The little girl's in bed," Rick said, clutching at the first excuse which entered his head.

"Have no fear," said the stranger, still resonantly; "Kidnapping is not one of the numerous offences on my crime sheet."

He swept magnificently past Rick, through the dark Disposing room and into the Gazer. Neata jumped up as he entered. He bowed low and pulled the cloak from his shoulders with an eloquent gesture which scattered snow over the room.

"Madam, forgive my intrusion," he said, the organ note more noticeable than ever. "I throw myself upon your mercy."

"Ooh, you talk like someone on a panel game," Neata gasped.

"I thank you for that from the bottom of my heart," said the stranger, and announced himself as Black Jack Gabriel.

Rick hardly heard. He was taking in the thick-set figure in its smart attire, and the curiously impressive streak of white hair on the leonine head (the fellow must be thirty if he was a day). He also took in the meaningful way Neata and Black Jack were looking at each other.

"I'm Neata Sheridan, and this is my husband Rick," Neata was saying.

"A delightful name," said Black Jack, bowing at Rick and grinning ingratiatingly.

"It's only short for Rickmansworth," said Neata, a little acidly.

Black Jack, standing facing but entirely ignoring the screens, began to speak. He was a born elocutionist, and soon even Rick ceased to blush—a nervous habit which manifested itself on the rare occasions when he was face to face with a real human being.

Black Jack had a dramatic tale to tell of his capture by armed police, who had chased him across roofs thirty stories above ground level. For the last nine years he had been imprisoned in Holloway, condemned to hard labour, knitting hemp mittens for the cameramen of Outside Telly.

Suddenly, only a few hours ago, an opportunity for escape had presented itself. Black Jack had broken into the Governor's suite, exchanged clothes, and flown off in the Governor's helic.

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" And here I am," he said. " I just landed at random—and how lucky I was to find you two."

Despite some opposition from an outbreak of bope music from the screen, Rick had been listening with great attention.

" If it's not a rude question, Mr. Black," he said, " What did you do wrong ?"

" That's rather a long story," Black Jack said modestly, knitting his eyebrows but positively smiling at Neata. " You see England used to be rather a strange place. In those days—you must have seen so much entertainment you would not remember—there was a government. There were also several industries, and something known as ' free enterprise ' flourishing. The government used to ' nationalise ' (as they called it) any industry which looked like getting too big and prosperous.

" Well, one of these industries was called Television—telly is the modern term. It was getting so big, the government took it over, but it was *so* big, it took over the government. A case of the tail wagging the dog, you see.

" Soon, everything was telly. And perpetual entertainment did a lot of good. Now half the people in the country work—directly or indirectly—for telly. It did away with unemployment, over-employment, strikes, neuroses, wars, housing problems, crime and football pools. Perpetual entertainment was here to stay."

" You tell it so well," Neata said. She was virtually cuddling against him. " But what did you do to earn your long prison sentence ?"

" I was the last Prime Minister," Black Jack said. " I voted against perpetual entertainment."

Neata gasped.

So did Rick. Drawing himself up, he said, " Then we don't want any of your sort in our house. I must ask you to leave before the H. Brogan's Watches' show comes on."

" Oh, don't make him go," pleaded Neata. She suddenly realised that here was the calibre of man she had been waiting for. He might well be leader of the rumoured subversive movement: he might cause interference on every wall screen in the country: but she could forgive —no, applaud !—everything, if he would just roll his eyes again.

" I said ' Go,' " demanded Rick.

" I had no intention of staying," said Black Jack coolly. " I'm on my way to Bali or Spain or India or somewhere without perpetual entertainment."

" Then what did you come here for in the first place ?" Rick asked.

" Merely to borrow some food to sustain me on my journey. The Governor's helic happened not to be provisioned for a long flight. Surely you'll do that for me ?"

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"Of course we will—if you must go," said Neata.

"Why should we?" asked Rick. "I'll be a Dutchman if I lift a finger to help a criminal." But catching sight of his wife's clenched fists and suddenly blazing eyes, he muttered miserably, "O.K., call me Hans," and made off into the Disposing room.

Ardently, the self-confessed Prime Minister turned to Neata. "How can I ever thank you for your assistance, madam," he breathed. "It will be useless for you to forget me, for I shall never forget you!"

"Nor I you," she said. "I think—oh . . . I think you're wonderful, and—and I *hate* the telly."

With swimming eyes, she peered up at him. He was pressing her hand: *he* was pressing *her* hand. It was the most wonderful moment of her life; her heart told her she was closer to the Meaning of Existence than she had ever been. Now he was leaning towards her—and Rick was back in the room again.

Hardly daring to leave them alone, he had snatched up a bag of dried prunes, two cartons of Silvery Soggmash, a cake, a sackful of Dehydratede Olde Englishe Fishe and Chyps ("There's no food like an old food") and a tin of Grinbaums which had been previously overlooked.

"Here you are," he said ungraciously. "Now go."

Black Jack was meekness itself, now his object had been gained. He seemed, indeed, pleased to be off, Neata thought dejectedly; but doubtless such police as could be spared from viewing would be on his trail, and he could not afford to delay.

Rick followed the intruder out into the snow, which was still falling by courtesy of H-C.C. Black Jack flung the provisions into the boot of his helic and jumped gracefully into the driver's seat. He raised a hand in ironical salute and called "Happy Christmas!" The helic lifted.

"Good-bye!" Neata called romantically and then, more romantically still, "Bon voyage!"

But already the machine was lost in the whirling white flakes.

"Come on in," Rick grunted.

They exchanged no words indoors. Morosely, Rick glared at the wall screens. Somehow, now, the savour was gone. Even the H. Brogan's Watches' Show had lost its appeal. He got up and paced about restlessly, fiddling with his teddy tie.

"Oh heck," he said, "Let's try White Star. I don't suppose any supervisors are watching us. We need a change, that's what."

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He flicked the controls over to White Star A, and gasped in astonishment. Neata gasped too, a little more gustily.

A sumptuous lounge showed on the screens. An immaculate announcer and three immaculate guests were leaning back in their chairs to watch a figure enter a door and approach the camera.

The figure, in its swagger cloak, with the distinguished streak of white in its hair, was unmistakeable. It bowed to the unseen audience.

Nervously, a little over-heartily, the announcer was saying, " Well, consumers, here comes the scallywag of the Bryson Brainbath Hour, safe back in the studio." And turning to the newcomer he said, "Well, Gervaise McByron—alias Black Jack Gabriel—your forfeit in this special Xmas edition of our popular panel game, ' Fifty Queries,' in which you got the lowest score, was to go out and talk your way into a green consumer-class home, returning with a souvenir of your visit. You've certainly carried out instructions to the letter !"

Popular White telly-star McByron smiled lavishly, said " I did my best !" and deposited some prunes, some Soggmash, a cake, Fishe and Chyps and a tin of Grinbaums at the announcer's feet.

" Your patter was terribly convincing," said the announcer uneasily. " I just hope none of our viewers believed a word you said about—er, Big Mother Telly. I almost believed you myself, ha, ha."

" You'll get suspended for this, McByron," opined a decorative lady who had been included on the panel for the sake of her undulating facade. " You went too far. Far too far."

" We watched every moment of your performance in the Sheridan shack via wave-bounce reciprocal," said the announcer. " I just hope none of our viewers believed a word—"

" Tell me, McByron," cut in the decorative woman coldly, " What did you really think of Mrs. Sheridan ?"

" If you want a frank answer," began McByron bluntly, " Compared with you, Lady Patricia So-and-So Burton, she was an absolute—"

" And so ends this special Christmas edition of ' Fifty Queries'," cried the announcer frantically, jumping up and waving his hands. " It was brought to you by courtesy of Bryson's Brainbaths. Don't forget: a mind that thinks is a mind that stinks. Goodnight consumers, everywhere."

Cut. Screen blank. Ten seconds to next programme.

Slowly, Rick turned to face his wife.

" There !" he said. " Disgraced ! That—that trickster ! We were just a spot of amusement on a snob-class panel show. *Now* are you ashamed ?"

" Don't say anything, please, Rick," Neata said distantly. There was something so commanding in her tone that her husband turned away and abjectly switched back to Green Star.

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Neata walked pensively out of the room. She still clutched the wicked little device which McByron, alias Black Jack, had pressed into her hand. Then, it had been startlingly cold; now, her palm had made it hot. She knew what it was, she knew what she had to do with it.

" Deadly . . ." she whispered to herself. " Deadly . . . the end of civilization as we know it."

The metal was a challenge in her grasp.

Ah, but McByron was clever ! She was dizzy at his impudence. Although evidently a leading tellystar, he was nevertheless a saboteur, a member—perhaps the leader !—of the subversives. And he had dared to pass on this weapon and to deliver his inspiring message of doubt in front of thousands of viewers.

What a man !

Neata was out in the snow now. She looked with strained face at the little device. It had to be fitted onto Rick's helic. Poor Rick—but he would never know ! The thought that she was helping in a mighty, silent revolution lent her determination.

Quickly, she bent down and fitted the anti-telly suppressor into Rick's helic.

Brian W. Aldiss

THE LITERARY LINE-UP

There are two pleasant surprises in store next month—the lead novelette is by John Brunner, his first long story for some time and in " Host Age " he has combined some clever twists on several popular themes in science fiction as well as a neat suspenseful story. The other novelette sees the welcome return of James White with " Red Alert," an invasion of Earth story with considerable difference, although little more need be said about the story as author White always produces fine material.

That doesn't leave a lot of room for short stories, but there will be several, somewhat shorter than usual—Alan Barclay, Alan Guthrie, and new author Duncan Lamont each being represented.

Story ratings for No. 39 were :

1. The Time Masters (Part 1) - - Wilson Tucker.
2. Any More At Home Like You - - Chad Oliver.
3. Life Agency - - - - - - Dan Morgan.
4. The Single Ship - - - - - Alan Barclay.

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Through the years there have been plenty of stories dealing with space "warps" although few authors have ever attempted to define one. Francis Rayer visualises in this story a number of ships being warped out of our own space-time continuum—and offers a possible suggestion of just how such an event could occur.

THE JAKANDI MODULI

By Francis G. Rayer

Illustrated by QUINN

"*Warbler* on course to contact talk-down," the communicator said metallically.

Alan Spey swivelled his broad chair and flipped a switch, lighting screen 17 on the second row of cathode-ray tubes facing him. Coming in at twenty miles altitude, the *Warbler* was a fleck captured by the spaceport radar. He depressed the button under the screen.

"Kelsey Central Control here. Go into high ceiling course round east radio beacon."

He released the button and his gaze sped over the four rows of twenty-five screens, eighty of which were illuminated by travelling dots. Dark, nearly six feet, he was filling out to match his height. Stray hair hung over his forehead, swaying as he swivelled the chair at the focus of the four rows of screens. Piled high in orbits above Kelsey Central, eighty spaceships waited his command, occupying a chimney of air twenty miles in altitude and thirty in diameter at its top.

A communicator fitted to his right chair arm buzzed. He flipped it on, gaze steady on two screens where ships lowest in the chimney were upending for touchdown.

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" A message from government command office, sir."

The girl sounded apologetic. Well she might, Alan thought. A man with eighty ships on his mind did not welcome interruptions.

" Yes ?"

He pressed a button, issuing swift instructions to correct a course on the second level. His gaze travelled over the other screens, pausing momentarily on 17. The *Warbler* had gone into orbit round the east marker signal with the practised accuracy of an old hand.

" We are asked to remind you that the *Dipper II*, due next, carries the Tertullian junior ambassadors," the girl said.

" Thanks."

He released the communicator button. He had not forgotten. The arrival of the Tertullian ambassadors had been news for months, and he had been expecting the *Dipper II* to drift into the top of the stack at any moment. Due from Mars, she had been fitted for her special task. The Tertullians had landed on Mars because conditions there were more like home, he recalled, and their extra-galactic vessel had been left there.

His eyes flickered to the wall clock. Another two hours would see him through this duty period, and he was glad. In an hour his replacement would be in, ready to memorise the overall picture before taking the chair.

" *Dipper II* on course to contact talk-down," the ceiling reproducer stated.

Alan's gaze swept along the screens, and he flipped on No. 4. The reproducer in the ceiling was on an uninterrupted single circuit from the great radio station due south of Kelsey Central. There, scores of radiomen brought in their scores of ships, with ten thousand free miles of space, he thought wryly. But once the ships were in the Kelsey Central chimney all were under the control of one man. A single brain was necessary to memorise and integrate the orbits, bringing the ships slowly down, level by level, until they could up-end and touch down. Only five men in the country could operate the Central Control panels. One was sick from an auto accident. That left four only, meaning six hours on, one taking over, and seventeen off. Alan hoped there would at least be no further accident to personnel, which would mean eight hours on, one taking over, and fifteen off.

He talked the *Warbler* to her second beacon, and the *Dipper II* into course round the east marker. A further screen flickered with its radar frequency request for touchdown. He saw her down, swept clear the channel, and lifted two ships half-way down the chimney, which were two-thousand feet under altitude. Over a score of ships were weaving

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upwards, level by level, through the chimney, courses shuttling among those of the ships coming down, Regular as ninepins on a vast board, others stood on the field landing disc, just down, or awaiting blast-off.

He brought the *Warbler* down one level, systematically checked a score of other ships, and saw that the *Dipper II* was going in too fast and overshooting her beacon course. A few snapped words brought her back on circuit and he smiled slightly as he thought of the Tertullian junior ambassadors. If they did not like a 4g turn then they could discipline their Captain, trained to fly the Earth ship for them ! Once in the Kelsey Central stack, an order from Control must invariably be obeyed without question, and each captain was required to know the orbit into the top level by heart.

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Never had the spaceport been so busy, Alan thought as he worked ships down level by level. Radioactive contamination of exhaust gases had posed a problem, but a young engineer had solved it by the water-flushed landing disc. That was fifty years before. Now, Hillington Kelsey was old and Kelsey Central grown to dimensions undreamed of when he set up the first control post. Alan could not remember a time when there had been more than sixty ships simultaneously in the stack. The number had leapt to eighty because of the Tertullian visit. He brought *Dipper II* down to second level. The *Warbler* was already in her third level orbit, at fifteen miles altitude. His gaze flashed to other screens. Among the increased traffic was the *Spacecar*, full of journalists from Mars, and the *Thunderstone*, a ship carrying high brass from preliminary discussion with the Tertullians on Mars. Soon would come the Tertullian chief ambassador, at terminus after a journey of over four light years.

A step came behind the chair. Alan glanced up briefly. His replacement, Harry Laing, was ten years his senior, and his brows were high.

"A lot of ships in the stack, Alan!" he said.

Alan grimaced. "The Tertullians. Journalists, officials. A few big businesses, too, waiting to see which way the cat jumps."

"Anything special?"

"N-no. Theoretically we can handle a hundred ships." He hoped they never would.

They were silent as he moved ships up and down in the stack. One blasted off and two landed. A new vessel came into orbit round the east marker beacon. The *Warbler* was coming down still, and would soon be in the middle of the chimney, a mere ten miles up. A red bulb over one screen and Harry Laing indicated it.

"Serious?"

"No. The old *Landflirt*. I've lost count of the times I've talked her down—and warned her! Now they've got a defective tube, and she's on emergency course down through the stack."

He watched the screens, with their weaving dots. Eighty ships on interlacing paths, courses crossing, rising and falling in a warp and weft exactly computed for maximum safety. Down through the whole wove the red dot of the *Landflirt*. Alan watched her, and the courses of the *Warbler* and *Dipper II*. Both were exactly on course. He brought the *Warbler* down a further level, and checked on the *Dipper II*. Her captain had retrieved his first error, and was exactly on orbit. He scanned other screens, then his eyes went back to the seventeenth on the second row. The *Warbler* had gone. No radar dot marked the silver screen.

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A shock ran through Alan from scalp to toe. Behind, breath hissed through Harry Laing's teeth.

Alan thumbed buttons. Flecks lit on the seventeenth screen, showing field and marker positions. The screen was working. Everything was there—except the *Warbler*. Even had she blown all tubes and dropped like a stone the screen would have shown her fall and destruction as she was automatically tracked by directive echoes.

" *Gone* !" Laing said.

The arm unit buzzed imperatively. " Report present position of *Warbler*."

Alan's lips dried. He moved three other ships down the stack automatically, saw another signal for touch-down, and landed it. Position of *Warbler* unknown, he thought. It was fantastic—impossible. The position of every ship within the stack was always known !

He compromised. " Screen has ceased to show *Warbler's* position."

There was a delay. The girl's voice was replaced by that of a man. The new tones had the snap of authority.

" Locate *Warbler* and inform at once of her position !"

Alan worked controls in a panel in front of his chair. The weaving pattern showed all other ships in order, but the gap the *Warbler* should have occupied remained unfilled. Control to ship radio reported inability to raise her. The overall big-screen radar showed nothing. The *Warbler* had not merely gone, but had ceased to exist.

It was an hour past time when he left the seat and Harry Laing slipped into it. *Dipper II* was nearly down. The heavy traffic of ships had thinned, leaving barely fifty in the stack. Alan mopped his brow, feeling twice his twenty-five years, and closed the sound-proof door of the control room with a mixture of relief and unease.

An upright man, with peppery moustache and military bearing was waiting.

" Mr. Spey ?" he snapped.

Alan nodded, recognising the voice. General Frazer had buzzed at five minute intervals since the initial order demanding the *Warbler's* position.

" Come with me !"

Frazer turned on a heel as he gave the order, and a subaltern stepped smartly beside Alan. They strode to the lift, and thence to an office at ground level. The subaltern closed the door.

" *Dipper II* was behind the *Warbler*," Frazer stated. " I don't need to remind you the Tertullian junior ambassadors were on the *Dipper II*. They're raising hell on earth. They suspect treachery—assassination gone wrong ! They've nearly burned up the radio, threatening immediate return to Mars and Alpha Centauri !"

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Alan nodded, understanding. "They think we tried to get the *Dipper II* and got the *Warbler* by mistake?"

"Just so!"

Alan felt irritated. "And you're letting a lot of one-eyed worms shout you down, General?"

A spark appeared in Frazer's eyes. He grew visibly in stature, his face carved from lined stone. "Earth needs bases in the Alpha Centauri system, Mr. Spey! Without them our development is finished!"

"Sorry." Alan guessed higher officials were giving Frazer a bad time. He sat on the desk. "Look, I've worked the chimney stack this five years, and no ship has done that before. She didn't blow up, or slip out of the pile. She just vanished. That the *Dipper II* was next was only chance. I've no more idea of what happened to the *Warbler* than you have, General."

General Frazer sighed. "You know the Tertullian chief ambassador is on his way. This needs clearing up before he arrives, or—"

He left the words and Alan guessed what he meant. Lack of explanation would destroy Tertullian confidence in Earth. There would be no grant of bases on Alpha Centauri system planets. Earthmen would stew in their own corner of space, deprived of stepping-stones to remote systems.

An hour later Alan had eaten, changed, and been asked to return to Frazer's office. He drove slowly from the apartments where staff lived. The rim of the landing disc was a mile away across the wide turf safety belt. Above was the unseen stack of ships, losing altitude and tightening courses to land, or spiralling up until given the clearance order. As he turned at a junction, a silvery needle settled out of the sky on plumes of fire. Above, another ship was momentarily visible through cotton-wool clouds, curving in on lowest level orbit, ready for turn-up.

He left the auto outside the great control block, where myriad radar antennae pointed at the sky. Kelsey Central had never had an accident—or a disappearance, he thought as he went in.

An old man with creamy white hair sat at the side of the desk. Astonished, Alan recognised Hillington Kelsey, who shook his hand.

"Mr. Kelsey can make no suggestion," Frazer said flatly.

Kelsey looked apologetic and pyramided his fragile hands. "You're too complicated for me these days, General. When will Mr. Jakandi from the computer section be here?"

"Jerry Jakandi?" Frazer eyed the clock. "Within minutes. And she's a girl."

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Alan had heard of her but they had never met. Hillington Kelsey pursed his lips. "A girl—with that responsibility?"

"But the grand-daughter of Ayres Jakandi, the mathematician!" Frazer put in. "That helps to explain."

They waited and Alan wondered what line Frazer and Kelsey were taking. Jerry Jakandi came in smartly and smiled. The smile and her tight, dark ringlets remained in Alan's mind. She was little over twenty, he judged, but had eyes filled with wisdom. Furthermore, he knew no wire-pulling on earth could have got her into Kelsey Central, if ability were lacking.

"You know of the loss, and its repercussions on the Tertullian delegation," Frazer said, elbows on desk so that his head looked sunken. "You have no explanation?"

Jerry Jakandi shook her head quickly. "None worth mentioning."

"There is not some—some coincidence of orbits?" Kelsey asked, leaning forward. "Some error which would only show up when many ships were in the funnel?"

Alan frowned, and realised this was a point he had not considered. Yet it was obviously not the explanation.

"No. If courses had coincided we should have had a crash. There are actual ships, besides orbits computed on paper."

"That is so," Kelsey admitted. "Could some pattern of other ships conceal the *Warbler*, or nullify the radar?"

The dark head shook a third time. "Impossible!"

General Frazer tapped his desk. "There has been no crash reported, and no normal radio contact with the ship."

Kelsey was silent, clearly with no other suggestion. The girl's eyes settled on Alan.

"You're Mr. Spey, who was on duty?"

"I am."

"Then I'd like to check figures with you later."

The door opened almost explosively and a junior officer, harassed, conferred in whispers with Frazer. Alan saw anger, annoyance and irritation cross the General's face. "Try to get him to wait!" he snapped at last.

"Yes, sir."

The officer departed and Frazer scraped back his chair. "The Tertullian chief ambassador refuses to come in to be talked down!" he stated bitterly.

"But why?" Kelsey looked helpless.

"Suspicion!" Frazer swore. "Afraid we've some secret plan to wipe him out. Everybody knows the *Warbler's* gone already! Some news syndicate has been following the Tertullians ever since they

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landed on Mars to change to earth ships, and they've seized on this as hot news. Damn 'em." He swung suddenly and directed a finger at Jerry Jakandi. "You will plot a new course—one straight down through the stack! A safe, simple, direct course—"

Alan saw her mouth open, and close . . . Never in fifty years had such a request been made. Even emergency courses were far from simple and direct.

Frazer seemed to understand her hesitation, and silenced any argument before it came with a gesture of dismissal. "This is larger than any of us, Miss Jakandi!" His tone made the words an apology. "Earth needs bases near Alpha Centauri. It's taken over fifteen years of negotiation to get the Tertullian ambassador this far. If he leaves without landing it'll be the gravest tactical defeat we have ever suffered."

Silence, then she saluted. "It can be done. The computer can be cleared, some ships stood off. I'd like the man who will talk down the ship with me."

Frazer indicated Alan. "I'll try to keep the ambassador on schedule. It will be early in Mr. Spey's duty period."

"Then I'll take him!"

The conditioned air of the computer block smelt faintly of ozone and their feet were quiet on the compo floor. Data for a course to any planet could be prepared within the hour.

"The orbits for the hundred channels you have were plotted years ago, and have never been changed," Jerry Jakandi said as they descended in a silent lift. "Except for occasional emergency orbits, we're engaged usually in interplanetary routes. Freighters want maximum economy, military ships minimum transit time." She gestured, stepping from the lift. "What the General asked isn't easy."

Alan thought of the hundred possible courses down, and the hundred up. That made two hundred, not counting the various special courses, mostly for military ships. Of the possible hundred ships in the Kelsey Central Control chimney, any number might be landing, and any number taking off. That gave ten thousand possible orbit combinations. Assuming the random placement of ships in landing and take off, there were a hundred times ten thousand ultimate overall possible combinations.

His step faltered momentarily. "You have a million orbital combinations here!"

She smiled back at him. "Only just realised that? How many days have you had the same stack sequence?"

He grimaced. "Never! I'd never realised that before. It's always different. Like—like—" He sought for an illustration. "Like cube chess!"

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Her laugh tinkled as she opened a silenced door. " Cube chess is child's play compared with the orbits of 100 ships, in every possible combination, believe me," she said.

Alan felt inclined to agree as he followed between the rows of differential computers that could integrate a thousand variables instantly and give a solution that was no mere approximation. The control room, with its four rows of screens, was even simple by comparison. Jerry Jakandi worked with two assistants, men twice her age. Bewildered, he could only listen and watch, and try to store in memory such facts as he must know. Courses were modified. Others were temporarily abandoned on the supposition that a full hundred orbits would not be required. Down through the intricate mass of routes, which might consist of an unspecified number of ships rising, and an unspecified number landing, was plotted a simple spiral, to quick turn-over and touch down. Two hours had passed when it was completed. After, Alan took a sheaf of notes and went off to sleep. As he left the building a subaltern he recognised handed him a message.

" *Tertullian ambassador's ship is the* Allergo, *and will enter Central Control stack at* 1900. *Frazer.*"

Alan wondered whether he would sleep. Jerry Jakandi's notes burned a hole in his pocket. When he closed his eyes her laughing face danced behind rows of computations.

Half an hour before the *Allergo* was due to go into orbit round the east beacon marker signal Alan took over. First glance on entering the control room had shown traffic was heavy, and craft were stacked high in the twenty mile funnel that terminated on the landing disc. A bulb glowed red at one screen.

" The *Orgemore* from Venus," the man he was to replace said briefly. " Had trouble first with her tubes blasting off there, and I've just got her on an emergency orbit."

Alan studied the screen. The *Orgemore* was on a steady descent spiral at the perimeter of the aerial chimney. If her tubes failed she would speed out of the stack in a straight path which would terminate in the destruction of no ship except herself. Meanwhile, her course would demand no sudden manoeuvres or unnecessary stress. It was the same emergency course on which he had nursed down the old *Landflirt* during his previous duty period, he saw.

He was alone when the *Allergo* came in on the east marker, a trifle too fast. Correcting her, he wondered why the Tertullian skippers were always too rapid. *Dipper II*, with its load of junior ambassadors, had been the same.

" One-eyed worms !" he grunted.

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He had never seen a Tertullian, but the news screens had seldom failed to show them for months, their topicality reaching crescendo with the arrival of the ambassadors on Mars. Tall as a man, they were fat, vermiform creatures that balanced on one end and regarded humanity pensively with a solitary eye situated in the other. Nevertheless, their ships could reach Mars from Alpha Centauri in the minimum time of five years, which bettered by six months any earth ship driven as near the speed of light as it could be forced to attain.

Minutes later the reproducer rattled into life. " *Canopus*, military, coming into control."

Alan adjusted a pick-up screen that would start at the top and follow down through the twenty miles stack. The *Canopus* sped in sweetly and went into orbit round the east beacon marker with the exactitude of a military flagship with admiral aboard.

Minutes ticked by, and screens winked. Every sense alert, Alan twirled the chair, pressing buttons, issuing commands, sixty ships in his hands. Very slowly an unease began to dawn in his mind. The ships were flying motes that seemed to be working into a pattern. The *Allergo* had overshot, and was in corrected orbit. The *Canopus* was true as a dart on a string. Below, the *Orgemore* was descending the emergency way, a mere drifter circling the complexity of ships. Thus it had been with the *Dipper II*, the *Warbler*, and the *Landflirt*, Alan thought. His gaze went back to the screen where the military craft sped . . . had sped. It was blank.

A released spring, his thumb opened a channel to the general radio. " Contact *Canopus* !"

" Yes, sir." Moments, then: " No reply, sir." Delay again, then: " Report present position of *Canopus*, please."

Alan licked his lips, dry. " The *Canopus* is no longer visible on my screen !"

The same statement as before, he thought. Within moments the arm communicator awoke to a voice near panic. Eyes on his screens, Alan answered automatically, talking craft through the stack as he did. Yes, he knew the *Canopus* should not have vanished. No, it was inexplicable. Yes, he knew the Tertullian chief ambassador was adjacent in the stack and could have witnessed the disappearance of the *Canopus*, had he been looking.

When the bedlam ceased he felt sweat on his brow. The *Allergo* was descending rapidly on the path Jerry had computed, he observed. She left behind layer upon layer of ships, the limping *Orgemore*, and signalled for turn-up. He gave her turn-up, and she settled. Her

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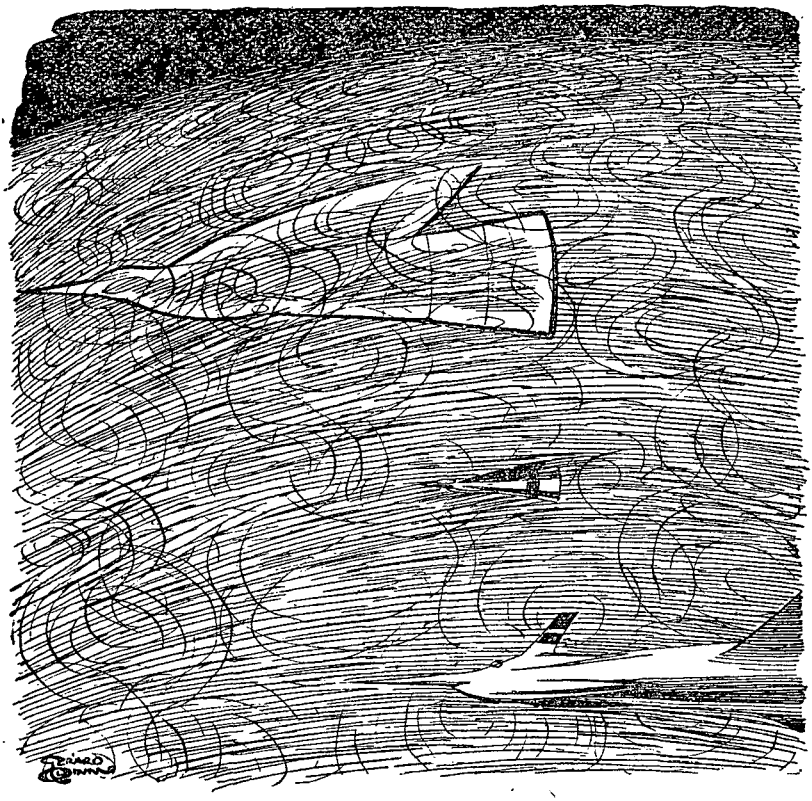

screen went dark and he concentrated on the other ships in the stack, searching some hint of the location of the *Canopus*. There was none.

The arm communicator did not sound again. When he went off, nerves jagged, an odd quiet seemed to have settled on the building. He sought General Frazer's office, and was admitted at the fourth knock. Frazer seemed to have aged.

"The Tertullian ambassadors have gone into isolation," he said wearily. "The chief ambassador left his ship immediately on landing and joined his staff. They have issued no statement, and will answer no message." A desk communicator buzzed. Frazer flipped its switch, and Alan saw his face grow pale. "Thanks." He sat back, tired eyes on Alan. "They have issued a statement—now. They wish to return

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to Mars, and Alpha Centauri, at once, and ask a take-off orbit be prepared for the ship they will occupy."

Defeat was bitter in his eyes and Alan nibbled his lower lip. No negotiation. Therefore no bases on Alpha Centauri planets, and no expansion of humanity. *Damned suspicious one-eyed worms* ! he thought. Calling them that somehow gave him relief and satisfaction.

"Can't they be convinced it's an accident ?" he asked.

"We're trying. But it's happened twice and they're a suspicious lot."

An hour later Alan was in his own rooms when a message came from the Kelsey Central chief controller, stating that the injured operator was back, and that he, Alan Spey, was suspended indefinitely from duty. Alan's face clouded and he hoped the suspension was merely to inspire confidence in the Tertullian delegation. Shortly after his private phone buzzed and General Frazer's voice awoke from it.

"You are free, Mr. Spey ?"

"Yes." Alan wondered if the suspension order had originated with Frazer.

"Good. You are to leave for Mars at once—"

Alan felt astonishment. "Mars ?"

"To prepare for the return of the Tertullians to Alpha Centauri." Defeat undertoned Frazer's voice. "We must assure their journey back is in every way smooth and uneventful. It is hoped they may then reconsider, and possibly allow another delegation to come to Earth sometime during the next decade. It's a long term policy, but all we can do." The General sighed. "We know they tap most of our radio communications. A message saying they're to be taken special care of on Mars may be interpreted as anything from weakness on our part, to a dangerous code signal that we've failed to liquidate them here and that Mars is to rectify the error. So you're to go personally, with Miss Jakandi, and will have twenty-four hours start, if they continue to sit tight here. It is your duty to see they land on Mars in the simplest and safest fashion, that no possible hitch arises, and that the Tertullian vessel is given every aid in clearing Mars and our system without danger or hindrance."

"Sugaring the pill of defeat, General ?"

"No, Mr. Spey." The crisp note was back. "The defeat is ours, and one we'll need half a generation to overcome."

The line went dead and Alan prepared to leave. As Frazer said, humanity had put up a bad show, and to speed the Tertullians' departure would at least prove no assassination had been intended.

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The Kelsey Central site was a vast expanse of concrete within the wide ring of the green belt. Alan parked, and found Jerry Jakandi waiting at the passing out offices on the concrete perimeter. She smiled, waving.

" We're to travel fast in a military ship !"

Alan studied her. " Why did General Frazer pick us ?"

" Possibly because you've assisted more ships in planetfall than almost anyone living."

" And you ?"

She smiled. " Perhaps because I've got more orbits by memory than anyone he knows."

A flat motorised truck took them across the concrete to the edge of the disc that had made Hillington Kelsey's fortune. Heat-resistant as mica and asbestos combined, unabsorbent as glass, it was flushed with an artificial lake mere inches deep. The water gurgled ceaselessly from perimeter to centre, and down through ducts to purifiers hundreds of feet below ground.

A dozen assorted ships stood like skittles on the disc. Jerry pointed. The *Thunderstone* was new, longer than the other vessels, and equipped with every defence and attack device humanity could devise. Her cage awaited them.

It was seldom he saw this aspect of the complex stack of ships, Alan thought as they ascended. In the control room the ships tended to become symbols in some weird game—characters that threaded a complex maze on courses that must never touch.

The *Thunderstone's* captain was waiting, brisk and straight as a ramrod, obviously unimpressed by his two civilian passengers, but intent on being pleasant.

" You are Captain Ned Gilliand," Jerry Jakandi said.

Gilliand nodded, and Alan liked him. " We're ready for clearance on military trajectory."

Alan followed them in, wondering if they knew just what a military trajectory cost a Central Controlman in perspiration. It was a direct blast up through the stack of ships, computed with an accuracy that would make even Ned Gilliand's short hair stand on end, if he knew.

A ship descended with a *woosh* from the blue, slowing on a pillar of flame as if elastic held it to the heavens, and settled amid a cloud of steam that momentarily hid it. High above in the midsummer sky Alan could catch occasional glimpses of other silvery motes swimming the chimney down.

Men hastened through the ship, amid clanging of doors and murmur of motors. Within ten seconds the movement and sound had ceased. Fifteen seconds later a signal that all personnel were cradled ran

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through the ship, and five seconds after Alan felt that the earth had exploded at its core and was pressing him in the back. It was minutes before they could leave the cradles and stand.

Jerry Jakandi massaged a tender spot. "That's the first time I've ever taken off in military trajectory—and the last!" she stated.

Alan felt an impression of half-inch netting was embossed for ever on a large area of his person. There were no ports here to watch the planet's surface recede.

"Going back to the *Warbler* and *Canopus*," he said. "In Frazer's office you remarked you had no explanation—*worth offering*. So what was the explanation you felt *not* worth offering . . . ?"

She looked at him quickly. "A woman in my position doesn't risk a hard-won reputation on wildcock theories."

Alan smiled. "I don't hire and fire you. But I *do* feel interested in what you think."

She listened to the murmur of the *Thunderstone's* tubes. "I've nothing to go on except a lot of figures you'd neither be able to check or understand—and the fact that both vanished ships were on the same orbit, in similar conditions."

"Same orbit?" He considered. "How's that an explanation?"

"I—don't know."

He pondered her words as they ascended to the control deck. Ned Gilliand had a quiet efficiency speaking of long experience and ample self-confidence. Alan judged the take-off alone had been a convincing demonstration of both. He wondered what Jerry meant. Same orbits—therefore the same weaving path amid the complex pattern of ships. She was clearly deep in thought, and once he caught a murmured phrase as she stood by his side looking down on the moon-like earth.

"Modulus of disappearance—"

He looked at her quickly, and saw any question would go unanswered. He tried to recall terms of student days, and knowledge that had drifted to be a mere background in his specialised training. A modulus could be many things. It was a multiplier to convert Napierian into common logarithms. He considered. Such a definition seemed unapplicable. It also indicated the relationship between physical effect and the force producing it. Perhaps that was nearer, he thought. Effect: a ship vanishes. Force producing it . . . the term was missing. When they went down he chanced a question.

"What could be—*a modulus of disappearance*?"

She smiled very faintly. "How should I know?"

Six hours out Gilliand sent a message into their cabin. *Trip cancelled. Come up.*

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They ascended again to the flight deck and found Ned Gilliand looking black.

" Thought you'd like to hear in detail," he said. He gestured at the radio. " General Frazer. The Tertullians have come out of isolation with the statement that they will meet earth ambassadors. They agree the accidents to the two ships, as they term them, may be only unfortunate coincidences. They note the operator then in charge has been suspended for disciplinary action," His lips bore a momentary half smile. " In short, there is now no need for our trip to Mars, and we're preparing to return."

Alan nodded understanding, not liking the bit about suspension for disciplinary action. Though probably it had sounded well in one of Frazer's messages to the Tertullian delegation.

The ship turned over and began to reduce speed. There was a moment of weightlessness, then pressure returned. The tubes began to murmur with a renewed surge of power as the ship went into a course which would give rapid planetfall. Alan returned to their cabin after an hour spent with Gilliand, and found Jerry pensive.

" We're on the same course the *Warbler* and *Canopus* took," she stated.

In the control room of Kelsey Central Harry Laing watched the tubes. The ceiling reproducer awoke. " Thunderstone *coming into your control.*" *He got her into a tight orbit round the east radio marker beacon, and turned his attention to the other screens. A freighter heavy with ore from Mars, with a defective tube, was drifting down the stack in emergency orbit. Time some of the old trading companies had a severe check, Laing thought. Another craft came in fast, overshooting the beacon orbit. He corrected the* Thunderstone's *course to suit, and glanced at the clock. Another two hours to go, he noted, and felt tired. His gaze reverted to the screens—and his fingers awoke to frantic life, dancing over the controls while he thumbed the communicator.*

The Thunderstone's *screen was blank.*

Ned Gilliand shook his head determinedly. " We can't change orbit just because of what you say. My superiors would— "

The ship quivered like a struck gong. The scene below, with the tiny central dot that was the Kelsey site, disappeared. The sun vanished, leaving a faint greyness.

" We've modulated out of space," Jerry said. " I've been trying to tell you !"

The radio operator looked back momentarily from his panel, his features pale. " I've lost contact with Kelsey Control, sir !"

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Alan experienced a mixture of triumph and dismay. This proved he had not been at fault in some inexplicable way. But it also placed them in the same difficulty as the *Warbler* and *Canopus*. He followed the operator's urgent fingers with his gaze.

" I suggest he see what he *can* contact !"

The pale greyness surrounding the ship was broken only in a dim line a few degrees broad extending axially round her. The narrow belt was rainbow hued, deep violet towards the ship's prow fading to red invisibility in the direction of her stern. He could just distinguish individual sparks of light making up the band, sweeping always backwards and changing hue as they went. Gazing, he knew he was witnessing some queer modification of the Döppler effect. The ship was moving faster than light, giving blankness for'ad and aft. Only within a narrow band parallel to her motion did remote stars appear, shifting to the red as they came level and passed.

He felt fingers grip his arm and met Jerry's eyes. " You're thinking what I'm thinking, Alan—"

He nodded. " Tell me about your modulus."

" I haven't finally computed it, but believe I can, when we get back to headquarters." She paused. " *If* we get back, I should say. A certain complex of movement and ships apparently modulates one ship out of ordinary space into this space-time continuum. Just as a musician can modulate chords from one key to another." She spread her fingers expressively. " It's happened three times. If we get back I can tape it, with the help of the computer."

" There are two signals in the distress band," the radio man put in abruptly.

Ned Gilliand's thick brows went up. " Contact them and identify."

There was a long pause, and Alan wondered what astonished messages were burbling into the operator's phones.

" The *Warbler* and *Canopus*, sir !" he stated at last.

A momentary pressure on Alan's arm told him Jerry Jakandi had almost expected it. She put her back to the queer dimness.

" Could you have them take bearings and join us, Captain ?"

Gilliand nodded. " A good plan, Miss Jakandi, if it can be done."

Alan left them, gazing through the port and wondering if the pale light outside was the hypothetical hyperspace postulated by various mathematicians whose work he could not pretend to follow. He pitied General Frazer, wondering, also, if the *Thunderstone's* disappearance had again made the Tertullians withdraw into shocked isolation.

Slowly he grew aware of two dim ghosts drifting up to match their course with the *Thunderstone's*. Pale steel in the faint light, they slid

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silently five hundred yards out, the *Canopus*, very long and sleek, moving slowly ahead of the smaller *Warbler*.

"And to think we found this by chance," a voice said at his side.

He noted the inner glow on the girl's face. "Half the great discoveries of the past arose from investigating phenomena that arose by chance," he pointed out.

"Perhaps," another voice put in. He turned and found Ned Gilliand behind them. Gilliand drew in his cheeks, and his face looked very thin. "We now have three ships in what we may term hyperspace, Miss Jakandi," he said quietly. "What we need now is an *out-of-hyperspace* moduli!"..

An odd expression came to her eyes. Watching her, Alan remembered a reproduction of a venerable man's face he had somewhere seen, years before. It came back, now . . . Ayres Jakandi's features, in the science section of a museum. At that moment Jerry Jakandi looked very much like her grandfather. She turned abruptly for the silence of their cabin.

"I'll see what I can do, Mr. Gilliand!"

Alan retired to a hammock and was not ashamed to sleep. A gentle movement came once, telling him the *Thunderstone* was turning, presumably to regain the point of her entry into hyperspace. It would need dead-reckoning, but would be the part of their journey even the ship's chief navigator could handle.

He slept, and awoke to a signal of general alert, and the knowledge that Jerry was in the adjacent suspended netting. Dark rings made bright her eyes.

"I've done my bit," she said. "It's up to Gilliand."

Alan felt she deserved encouragement. "Then we're safe! He could thread the ship through the eye of a needle, given a course!"

A twist ended his words. The *Thunderstone* seemed to stand on her tail and dance. A fiendish cartwheel followed, and he clung to the net.

"This isn't a course—it's insanity!"

"There is a range of moduli," Jerry murmured. "The moduli required to move from one continuum to another is necessarily more difficult when the ships are so few. But it's simpler to work on paper as there are fewer constants."

"I'll say it's simple!" Alan grated as the hammock inexplicably became entangled with his open mouth.

A curve lifted them, then the ship rang like a gong. Light blinked on . . . sunshine. The earth was thirty miles below.

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Jerry Jakandi smiled. " That chief navigator needs a medal for his dead-reckoning !"

Alan's astonishment was unabated when he walked from the Kelsey disc, and he paused twice to look back at the silently standing *Warbler*, *Canopus*, and *Thunderstone*. Frazer was waiting at the edge of the decontamination area. His hair was awry, his uniform creased. He had obviously not slept for some days.

" Ruined !" he stated, his lips closing like a trap. " The Tertullians have gone into isolation, and demand guarantee of a safe transit back to their ship on Mars. There will be no bases for us." He smote a folder grasped in one hand. " They consider us unreliable and unpredictable, and our ships uncertain and dangerous ! They refuse to have any further communication with us, and would as soon grant us bases as cede Alpha Centauri and all their empires to us!" He breathed deeply, preparing a new onslaught. " Twice I've asked for a safe orbit, and twice ships disappear ! Finally, when the Tertullians are willing to overlook everything, the *Thunderstone* vanishes under the nose of the *Spacecar* and her load of copywriters, and every news-agency on the planet has it on every newscreen within five minutes."

He paused for breath, wilting them with his glance. Jerry smiled.

" Let them go, General."

Frazer reddened. " Go, with no negotiation ! This will cost me my career . . ."

" Not when you explain you have another method of reaching systems beyond Alpha Centauri—and further," Jerry said. " It's all a matter of modulation—the inter-relationship of moving bodies—"

Alan saw her hand close on General Frazer's arm. She smiled. " Any ship can do it, General. It's swift, neat, and makes a few light-years seem like a walk next-door."

She was guiding him away from the landing disc. She looked back, and smiled.

" I shall need to see you later, Mr. Spey. A matter of the practical application of theoretical considerations."

Alan laughed as her grip again tightened on Frazer's arm. " As I said, this series of moduli show space is not finite. You may remember my grandfather's work on the modulatory fields of sub-atomic nuclei—"

Her voice faded from hearing. Alan put his hands on his hips and chuckled, oblivious to the officers nearby, the control building awaiting, of the whine of a ship dropping from the stack towards the landing disc. Jerry Jakandi was trumps !

Francis G. Rayer

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Compatibility of temperament would be a very essential factor between men and women applying for interplanetary colonisation and the answer could well be a special conditioning process. However, the draw for marriageable partners might be an entirely different hazard.

PRIME ESSENTIAL

By Frank Weight

The first unmistakeable positive reaction came when he found that he was no longer able to smoke. Roger looked at the cigarette he had just puffed, the first of the day, and as usual, lit shortly after he had opened his eyes. He took another tentative pull, inhaling as he had always done for the past fifteen years, then hastily crushed it out as his nausea increased.

He wasn't alarmed. Already he was rationalising his physical symptoms and, as he showered then stood in the hot-air blast to dry himself, he was dismissing the incident as being wholly without importance. Nicotine lowered the sugar content of the blood. His own sugar content, on awakening, had been low to begin with and the smoke had lowered it still more. A cup of sweet tea, a knob of sugar or a tablet of dextrose and he would be himself again.

Dry, he slipped into maroon shorts and sandles to match and, slipping the strap of his script over his shoulder, emerged into the living quarters of the Hive.

June looked up as he entered the mess room. Like himself she was unclothed but for shorts and the addition of a bra, and the yellow nylon did nothing to detract from her figure. Unlike him she was smoking and, as he sat down at the table, she offered him a cigarette.

"Smoke?"

"Not yet." He punched the button for breakfast and looked around the empty room. "The others not up yet?"

"After last night?" She blew smoke towards him and managed to look twice her age in experience and worldly-wisdom. Roger wasn't

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fooled. June, like all the colonists in the Hive was basically decent and stable. Debauchery existed only in her imagination and she would have been the first to walk out if anything like that took place. She turned as the others entered the room.

Sam was about Roger's age, thirty, and John was a couple of years younger. Both of them were smoking. April was dark with liquid brown eyes and a figure more in the classical tradition than that of either June or May. May herself was a flaming redhead with the almost translucent skin belonging to her colour. Naturally she wore green. April looked well in red though sometimes she wore yellow like June who, being blonde, could wear almost any colour and get away with it.

All of them were smoking.

They remained smoking until the automatic kitchens had served breakfast and, even then, they continued to smoke between courses. Roger swallowed several cups of tea, adding sugar until it tasted more like syrup than tea, and fortified himself with a big meal. Breakfast over he opened his script and took out cigarettes and a lighter. He put a cigarette into his mouth, lit it, inhaled, and immediately felt violently ill.

He waited for a moment, and then repeated the experiment with the same result. Slowly he crushed out the cigarette acutely conscious of the eyes of the others watching him.

"Anyone want a lighter?" He forced himself to sound cheerful. "And cigarettes?" He threw them onto the table. "I don't think I'll be wanting these any more."

"Oh, Roger!" June rose and came around the table to stand beside him. "Are you sure?"

"I've tried twice," he said, and smiled up at her. "I'm afraid that it's pretty definite."

"So soon?" April looked worried. She had joined the group a little after Roger and, accordingly, her turn should be next. Sam, the youngest addition, shrugged with an attempt at indifference.

"It comes to us all," he said. "Sooner or later."

"Yes" agreed John, and nervously dragged at his cigarette. "After all, that's what we're here for, isn't it?"

No one answered him. It was one of those questions which needed no answer because they all knew exactly why they were there and what they had to do. The Hive was exactly what its name implied. From it, at regular intervals, men and women were sent down to the planet about which it orbited, there to set up a new colony. Deneb IV was a virgin world, ready and waiting for the colonists who would spend their lives to turn it into a new Earth.

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But it wasn't as simple as just dropping a few men and women together with some equipment and leaving them to get on with it.

For one thing the mean temperature of Deneb IV was about a hundred and ten degrees fahrenheit, too hot for comfort and too hot for health unless the colonists were used to it. So the living quarters of the Hive were kept at a temperature ten degrees above that. They wore the minimum of clothing, not for any erotic reason, but because it would have been unthinkable to wear more. There were other things, all stemming from the fact that once the colonists had been dropped they would be utterly on their own. Virgin world or not Deneb IV could hold some unpleasant and unsuspected surprises—a virus or a bacteria which could find a ready host in human beings with the resultant danger of a star-wide epidemic.

And so the colony-ship, the Hive, orbited around the planet and, from time to time when they were ready, dropped more men and women down towards the world below.

"Damn it!" June seemed upset by the fact that Roger could no longer smoke. "Why can't we all go together?"

"Because we don't all respond to the conditioning at the same rate." Roger smiled at her, grateful for her interest but wondering whether it was because of himself or of the system in general. "Fred and Henry went three weeks ago. Julia and Mary two days after them. Anyway, the conditioning quarters only holds six at a time, so we can't all go together."

"They could have made it bigger," said May. She sat in her chair, outwardly relaxed but inwardly keyed-up. Roger could tell it from the way little muscles twitched beneath the milky whiteness of her skin. Deneb IV had a thick cloud blanket, so strong pigmentation wasn't necessary for protection. Any sun-tan they would need could be naturally acquired after they had landed and May was one of those girls who prided herself more on her white skin than any sun-tan possible. She drew at her cigarette as though by so doing she could convince herself that her turn to leave the comfort and security of the Hive was a long way off yet.

"They could," said Roger. "But they didn't. And I think they kept it so small for a reason."

"I can guess at the reason," said John. He looked at April and his eyes were glistening with anticipation. "A small party means a social party. It gives us a chance to get to know each other really well."

"To select our mates, you mean." June stared distastefully at the young man. "I could think of at least three other ways in which we could do that."

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"How?" John seemed interested. He was always interested when it came to women. Roger had a shrewd suspicion that he had chased June quite a bit after he had joined the group but he doubted whether John had had any success. It didn't seem possible that if he had he would have turned from her to April. Not that there was anything wrong with the brunette, it was just that her type of beauty and that of June were so opposed that if a man were drawn to one he would hardly likely be drawn to the other.

June shrugged. "Well, by mutual attraction, for one thing. I don't know about the others but I'd prefer a wider field of choice than just three men. Suppose that I like none of them? Would it be fair for me to have to marry one just because there was no choice?"

"I think that's all been taken care of," said Roger slowly. "After all we are being conditioned all the time. We don't know what may happen to us next."

Which wasn't the entire truth. They did have some idea because of the overlap system which enabled them to see what had happened to others. First was usually the loss of the desire to smoke. Then they went off tea and coffee and other things to which they had been used all their lives. Towards the end no one knew just what happened because, at any time, one of the number would leave the group and enter the drop-shell. He, or she, would wait there until joined by a partner of the opposite sex. Then they would go down together. But what happened after they entered the shell no one could guess for the simple reason that no one had ever returned to tell them.

In effect it was like death. They knew it was coming but they didn't know what would happen when it did.

Roger went off tea the next morning. He sipped at it and almost immediately felt violently ill. He pushed away the cup and drank water instead. No one said anything but, after the meal, June came up to him while he was alone.

"Roger?"

"Yes, June?"

"Roger, I . . ." Startlingly she blushed and, in annoyance at her own lack of self-control, became angry. "Hell! Why do we have to be so conventional? What I mean is . . ."

"I think I know what you're trying to say," he said gently. "The answer is yes. If you want to join me then I'll be happy and proud to call you my wife."

"Hearts and flowers," she sneered, then immediately was sorry. "Forget it, Roger. What I wanted to ask you was something else. What happens if no one wants to join you?"

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"I don't know." He managed to hide his disappointment. He really liked June and found her tall, supple figure most attractive. "As far as I know it's never happened."

"The conditioning again?" She shivered and stared around her. She knew and they all knew that the entire living quarters was permeated by an invisible, odourless gas. Just how it worked and what it did they didn't know but it was one of the reasons why they remained sealed in a world of their own.

She shivered again. "Sometimes I wished that they would hurry and get it over with and at others I wish that I'd never volunteered at all. In a way it will be a relief to get out of these walls but, at the same time, it scares me to think of what's waiting for us down there."

"I know how you feel," he admitted. "It's like taking a dive from a very high board. There's that moment in between diving and hitting the water when you wish that you'd never started."

"Yes," she said, and hesitated. "Which of them do you prefer, Roger? April or May?"

"I've never thought about it," he lied. If he were to tell the truth he would say he preferred neither of them to June herself. Suddenly, to his own surprise, he found himself kissing her. For a moment she struggled then, as he held her tighter, she relaxed against him. The warmth of her kiss startled him, normally she appeared to be cold and indifferent to men, then she was pushing him away, her breath coming faster than usual.

"No. No, Roger. I . . ."

He stared after her as she almost ran from him and out of the room. She had tried to prove something, what he didn't know, but it was his own reactions which surprised him the most. Promiscuity had long been out of fashion. Casual kissing and extra-marital relationships were frowned on in polite society. The pendulum of behaviour had swung to the opposite extreme from the wide-open years at the end of the twentieth century and the social mores were almost Victorian. What he had done had been totally against his nature. He was still brooding about it when May entered the room.

She was beautiful. She was lovely in that excitingly sexual way which only a clear-skinned redhead can be and the green nylon of her brief clothing aggravated rather than concealed her feminity. Roger found himself forgetting June as he stared at her.

"Hello, Roger." She tried to be casual but there was something strained and unnatural about her. "What happened to June?"

"Nothing, why?"

"She passed me in the corridor, looked as though she had received the shock of her life. What did you do, kiss her?"

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"What made you say that?"

"Because I know June." She smiled up at him and for the first time he noticed that her eyes were more green than blue. "Cold outside and warm inside. Her mind against her body. That type of woman is afraid of passion because she thinks that it weakens her. By surrendering to it she believes that she is surrendering her individuality." She stepped closer. "Did you kiss her?"

"Yes."

"Do you want to kiss me?"

He did but he didn't say so. Physically he desired her but mentally he was asking himself why. She was female but, up to this moment, that fact hadn't bothered him at all. Like all his class and generation he had a horror of being thought unstable but, as he stared at May, he felt himself ignoring his upbringing.

"Kiss me," she invited. "You want to so why don't you. Kiss me!" She stepped closer to him, so close that he could feel the warmth of her body against his.

"No!" He stepped back and watched her passion-distorted features recover something of their normal calm. "I'd like to kiss you, yes, but not for the reason you want me to."

"Reason?" She shrugged and automatically lit a cigarette. "What reason?"

"I'm in a peculiar position," he said. "I'm due to enter the shell at any moment now and, no matter what you do, there can be no come-back. In other words, May, you want to kiss me, not because you care for me, but because you want a cheap thrill."

"Thought it all out, haven't you?" She inhaled and blew a streamer of smoke towards him. "How do you know that I won't be joining you in the drop-shell?"

"I don't, but if you do that will be different. You'll be there because you want to be there. You'll be with me because you want to be with me—for good."

"Maybe that wouldn't be such a bad idea at that." She stared at him through the veil of smoke. "Or would you prefer June? Or even April?" There was spite in her voice as she asked the question and Roger was startled. He hadn't realised that May could be so jealous.

If it was jealousy. Personally he thought that it was injured pride. No woman likes to think that her body isn't irresistible and May was very proud of her body.

Or perhaps it was because of the fact that, of this group, he was the first to go. He would be replaced, of course, but only after he had been dropped, and that meant that one of the three women would be accom-

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panying him. Then another couple would join the group and so on until the complement of the Hive had been exhausted. It could well be April as much as any of the others.

He thought about it that day and all that night and the next morning he didn't feel like breakfast at all. He lay for a long while on his narrow bunk, staring up at the curved metal of the ceiling and thinking all manner of things which had no real significance. After a while he rose and showered, dried himself and, while reaching for his shorts, paused with a strange reluctance.

He didn't want to get dressed.

He didn't want to feel the smooth nylon against his body. He wanted to remain free and uncluttered by anything unnatural at all.

He thought about it, trying to rationalise his feelings, then forced himself to get dressed. A short corridor led from his cabin towards the mess room and he walked along it almost dragging his feet with subconscious reluctance to meet the others. Voices came towards him and he paused, one hand on the catch, listening to what they were saying.

It wasn't important, and that was the trouble. Sam joking with May. John saying something to April who didn't reply and then saying the same thing to June who did. A muted babble of senseless noises interspersed with artificial laughter and the sickening polite unessentials of modern civilisation.

Suddenly he wanted no part of it. It wasn't that he disliked any of the others it was just that no matter what they did or said or had to say he couldn't have cared less. He was no longer interested in them or their conversation. He wanted to go somewhere where he could be alone with his thoughts.

There was only one place where that was really possible.

He turned and walked down the corridor to a heavy door with a single red handle. He tugged at it and the door opened. A second corridor joined the first, its smooth sides broken with doors over each of which was a signal light.

Green for vacant, red for man, yellow for woman. He stared at them, noting without surprise that most of the doors had no lights at all and that, of the rest, none betrayed an occupant. Had there been one with a yellow light he would have entered that door. He didn't know why but he knew that he would have done. As it was he walked to the nearest door showing a green light, tugged at the handle and walked into a compact chamber. The signal light, as he closed the door behind him, changed from green to red.

He waited.

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That was all he could do and that was all he wanted to do. Wait and, while waiting, think.

He thought of many things but mostly about the skill and shrewdness of those who had designed the Hive. The conditioning he had expected but none of the volunteers had ever guessed just what form it would take. If he had retained the capacity for surprise he would have been surprised but, like his other emotions, that too seemed to have been numbed so that it didn't bother him.

It was the subtle logic of it all which he admired.

First the recognisance that, no matter how intelligent or capable the volunteers thought they might be, yet, as colonists, they were useless until changed. First the drug addictions of tobacco and caffien had to go. The artificial mores which had made the human body a thing of shame had gone into the discard through the high temperature and close proximity of the sexes. The other adaptions, more subtle, less obvious, had followed. One by one the conditioning and restraints of civilisation had been peeled away like the layers of an onion until only the primitive basics were left. A man, healthy, untainted with the civilised desires for tea or coffee, tobacco or alcohol, shame or promiscuity. The shy were elevated and the brash repressed. What was left was a person with all the memory and knowledge of what he was and what he had to do without any of the addictions and artificial barriers of an artificial civilisation.

The only possible sort of man who could land and begin to build a new world by his unaided efforts.

Unaided? Almost.

Roger heard the door click and someone enter the compartment. He turned, the question in his mind dying as he stared at her. Not June. Not April or May. A stranger! And again the logic of it forced his reluctant admiration.

Because, of course, there were more than the one set of conditioning chambers and more than the one group undergoing conditioning at a time. And strangers were better for one another than the uneasy friendship of close proximity.

And so he didn't worry as he heard the click and felt the jar as the drop-shell left the great bulk of the Hive, and began to fall on its long journey to the planet below. For, basically, to a man any woman is as good as another and, to a woman, any man will serve to father her children.

Which, when you come to think about it, is the only important thing the colonists had to bear in mind.

Frank Weight

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To anyone in the Northern Hemisphere who has had an opportunity of seeing the aurora borealis it will doubtless remain a memorable occasion. In the following article Mr. Newman discusses the cause of this fascinating phenomenon and some interesting information concerning the sun.

SOLAR INTERFERENCE

By John Newman

It is a part of the philosophy of this modern age that we are used to thinking of the Sun as being a remote, 93 million mile distant source of heat and light. Just a well-banked fire to keep us comfortable. However, we do have a pretty good understanding of the electromagnetic radiation from the Sun and some excellent theories to account for its production.

Hoyle has widely spread the idea that the Sun is pulling in gas from interstellar space, the effective sphere in which this is happening reaching out to about a thousand times the Sun's diameter so that a tunnel is being drilled through the gas cloud in which we are moving. However, it is not so widely known that the Sun is usually spraying us and surrounding space with jets of its surface material and that these particles have a decided affect on our everyday lives. Not only

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do they affect radio transmission and blow fuses in power lines but it is now believed that there is a direct connection between the more intense outbursts of them and periods of very hot, dry weather such as helped to form the worst of the dust bowls.

The intensities of the streams of particles from the Sun appear to be highly variable and it was a long time before any sense could be made of them. As, unlike light, we cannot see them and they do not reach down as far as the Earth's surface, we have to rely on their secondary effects to get some idea of their nature and origin. One of their effects is the beautiful fluorescence of the upper air that occurs in the higher altitudes, the aurora polaris known in the north as the aurora borealis or Northern lights and in the south as the aurora australis or Southern lights. Unfortunately, this most brilliant of Earth's aerial displays is seldom seen as far away as Southern England but the other effects are felt there and can be accurately measured.

It is almost a hundred years since it was first suggested that the Sun could effect the magnetic field of Earth, after it had been observed that a violent magnetic storm (very intense fluctuations in the magnetic field that surrounds the Earth) occurred several days after a brilliant explosion had been seen near a sunspot on the surface of the Sun. The majority of astronomers and physicists merely put it down to a coincidence, although there was a slight magnetic disturbance at the exact moment of the flare.

But, in the succeeding years, far too many 'coincidences' of this type occurred and it was gradually realised that there must be a relationship between activity on the Sun's surface and both the minor and major variations in the Earth's magnetic field.

It is now known that the disturbance at the moment the flare is seen is due to ultraviolet light travelling at the same speed as ordinary light, taking eight minutes to reach us, and being absorbed in the upper air with the formation of ions. This is merely an intensification of the ultraviolet that we normally receive.

The violent magnetic storms that occur a day or two later are due to totally different radiation, electrically charged particles travelling relatively slowly, less than a thousand miles a second, and also being absorbed in the upper atmosphere. Because of their electric charges they are strongly attracted to the centres of greatest magnetic intensity, the magnetic poles, and it was realised that these same particles could be the cause of the aurora polaris.

The aurora polaris is the most distinctive and impressive of all the aerial phenomena of our planet and, until recently, one of the least understood. At times it can be seen as far south from the Arctic as

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the Mediterranean countries; the ancient Greeks several times mistook it for the light of a burning city and it was often connected with supernatural expressions of anger.

The light of the aurorae comes from definite places in the atmosphere and these can be accurately found by triangulation using photographs taken with an exposure of a second from two separate places at the same moment. The form of an aurora continually changes, sometimes very rapidly and at other times so slowly that it appears to be almost stationary. Its most distinctive form is that of a long wavy curtain with well characterised folds and flutings. The distance from the top to the bottom of the curtain is usually about 20 to 30 miles but it is very rare for the base of the curtain to be less than 60 miles above the surface of the Earth whilst the top may be as high as 500 miles. The higher part of the aurorae is in sunlight although, to an observer, the Sun may be well below the horizon.

The most intense auroral displays give enough light to read by, although they have less surface brightness than the Moon and the brighter stars can be seen through them. The brightest aurorae are yellow-green in colour and sometimes the curtains are edged with an intense red but other displays can be wholly or partly green, red, blue, grey or violet. Their highest points are in the direction of the magnetic poles and the flutings of the curtain point along the direction of the magnetic lines of force in the Earth's field.

The number and brilliance of aurorae vary over an eleven year cycle, just as do sunspots, and they are most brilliant during periods of intense magnetic storms. The spectra of aurorae have been measured and they show that the light is due to the fluorescence of excited atoms and molecules, just as is the light from low pressure mercury and sodium lamps. The characteristic colours are due solely to oxygen and nitrogen at the very low pressures found many miles above the Earth.

At the same time as the charged particles from the Sun create this light, they pick up electrons and become neutral particles and radiate their excess energy away as light. It is possible to find, from the positions of the lines in the spectra, the speed and types of particles colliding with our atmosphere. Hydrogen is the commonest element in the Sun and, as might be expected, the majority of the particles are hydrogen nuclei. From the Doppler effect, the shift towards the violet, their speeds are found to range from 125 to nearly 1000 miles a second so that they take at least one day to reach the Earth.

The auroral effect is not restricted to the Earth or the Solar System. It can be seen in the expanding gas clouds from novaed stars and in

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interstellar gas clouds where fast-moving electrons collide with the atoms and molecules and excite them to fluorescence. A high density of electrons gives a bluish light whilst a small number of electrons gives the more widely found green nebulae glow that was once attributed to the hypothetical element nebulium.

Short wave transmission is affected by these particles for radio waves are reflected from the ionosphere, the series of layers of ionized gas above the Earth, and the ionosphere is maintained by the Sun's radiation, mainly the ultraviolet. Any increase in the amount of ultraviolet or any other ionizing radiation entering the Earth's atmosphere alters the height and thickness of the layers and so alters their reflecting properties and thus causes fade-out. This is particularly bad during intense solar flare and sunspot activity.

At first, it might seem unbelievable that matter can travel from the Sun to the Earth against the giant pull of the Sun's gravity but conditions on the Sun's surface and interior are so violent that it is possible for some material to be thrown clear out into space. The first theory suggested that the material is a cloud of an approximately equal number of oppositely charged hydrogen nuclei and electrons, the two charges cancelling one another out so that the whole cloud is effectively neutral. It was not decided, and is still not certain, whether the particles can be accelerated by magnetic fields in the space between the Sun and the Earth but it is now known that the magnetic fields of the Sun play an important part in their production. This theory went on to correctly explain that the charged ions smash into our atmosphere, transfer part of their energy to the atoms and molecules of the upper air so that they become excited, contain more energy than their neighbours and then return to a normal state by radiating their excess energy as light.

At the same time, they produce strong electric currents in the conducting upper air, these creating the intense magnetic fields that effect the terrestrial magnetic field. This theory does explain the effects on Earth but gives us little idea of the origin and periodicity of the sprays of particles leaping out from the Sun.

The obvious places to look for tremendous movements of hot gases are sunspots, where there is tremendous activity below and on the surface. It is known that the brightest aurorae and the intensest magnetic storms occur a few days after some sunspots cross the centre of the Sun but the curious thing is that not every sunspot moving across the centre has this effect and that often particles arrive when there is not a single sunspot to be seen.

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This can only be explained by postulating the existence of two origins of the particles and this has recently been shown to be true.

It was only by considering the frequency and intensity of magnetic storms and sunspots that it was realised that there are not only two origins of the particles but that there are two types of sunspots, both effecting the particles, and giving rise to two types of magnetic storms.

The very violent magnetic storms last only a few hours and always have their origin in large sunspots, occurring one or two days after the sunspot has crossed the centre of the Sun's disc. The smaller magnetic storms come at regular intervals of about 27 days (the Sun rotates on its axis once in 24.7 days but, as we are moving round it, it appears to take longer than that before exactly the same disc is facing us) and last for several days. It wasn't until 1944 that it was discovered that the lesser storms can be reduced in intensity by the presence of the second type of sunspot, the type that does not spray out particles. Three days after one of these has crossed the centre of the Sun's disc there is a lull when practically no particles reach us and once this was realised the problem became simplified.

What were thought to be lesser magnetic storms are actually the average background from the whole of the Sun's surface and it is the quiet periods when few particles hit our atmosphere that are abnormal. When a cause for the suppression of the particles during the quieter moments was found, the picture became very much clearer. Once again, it is the sunspots that are the prime factor.

There are intense magnetic fields around and above sunspots and these effect the background emission of the Sun. The whole of the solar surface is continually emitting particles from small spikes of gas that jet out from the surface for a few minutes and then collapse. These spikes can only be seen using a special mask to blank out most of the light from the Sun and then taking motion pictures of the edge as seen against the artificial eclipse.

Above the small sunspots that do not spray out particles there is a vast cone of space, with its point towards the Sun's surface, from which the magnetic field reaches out and prevents the particles from entering. This ' cone of avoidance,' as it is known, is like a diverging lens and a similar effect is used in electron microscopes and cathode ray tubes to produce converging lens to focus electrons. All the particles from the Sun are thus bent away from the cone and concentrated along the edge, none entering the centre of it.

These cones sweep out giant paths across the Solar System, travelling round as the Sun rotates. When we enter one cone there is first an increase in the number of particles hitting us, this lasting for several days as we pass through the edge of the cone, and then there is a period

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of quietness in the centre before we pass out to the other side of it. Then the number of particles again increases before dropping down to a smaller value.

Occasionally, superimposed on this pattern, there are the violent outbursts from the active emitting sunspots. As the particles from this type smash through the atmosphere of the Sun, they cause the electrons in the atmosphere to vibrate and broadcast radio waves. The higher the density of the electrons the higher the frequency of the radio waves.

By studying the events on the Sun it should be possible to forecast for days ahead the effect that the general pattern will have on communications, the weather and to give warnings well ahead of time when a solar flare is likely to cause damage by surges in power lines and complete breakdown of long distance radio transmission. However, the most important thing is that we are gaining a more detailed insight into the mechanisms occurring under conditions that, as yet, we can only approximate for a fraction of a second at the centre of a fusion bomb but are commonplace elsewhere in the Universe.

John Newman

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GETAWAY

How ingenious can Man become when thrown entirely upon his own initiative and resources? A new author presents a carefully evolved problem in escape tactics whereby the prisoner both loses and wins.

By Michael Harrison

Illustrated by LEWIS

Because nothing now could go wrong—except some catastrophe which would involve them all (such as a direct hit from a meteor, while the screens were down) the young Security Captain who had been set to guard the Prisoner let something of his aloofness drop. As the fast space corvette clocked off the thousands of miles of space from Earth, and Asteroid NM-P 46729 came steadily nearer, the young man became almost chatty—and only hesitated on the very verge of friendliness.

What could go wrong now? The valuable cargo—and the Leader of an almost-successful revolution was certainly that—could not be hi-jacked between this point and the asteroid; for the tiny planet had been first selected in conditions of the utmost secrecy—after the Prisoner had been captured and securely locked away—and then patrolled since that day, in a constant round-the-clock watch.

Nor would that watch ever be relaxed, until the various detectors registered the fact that a living man no longer paced the floor and ate out his heart beneath the domed-roof of the prison-blister.

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Perhaps it was the knowledge that he would be lucky ever to speak again to a human being that made the Prisoner—Rathgarn—subdue the impulse to snub the young Security officer. Rathgarn had been a leader of the remote kind: who win men to desperate causes by seeming to be something apart from the ordinary run of mankind.

'That you could ever have thought of winning against the Empire!' the young officer said admiringly—and it was this very thought which had shattered the apathy of the thousands who had rallied to the banner of a doomed—a lost—cause. Looking back, both rebels and their enemies knew that there had never been a chance for Rathgarn's cause. Yet the very fact that a man could declare himself an enemy of the hated bureaucratic police-state that the Empire had become warmed the hearts of men, not so much like wine, as like some frenzying drug.

For centuries man had not dared to rebel—and for centuries the yoke of 'benevolent dictatorship' had strengthened its hold even as it increased its weight. No-one starved—the Empire saw to that. But—men reflected—you couldn't do anything else, either. You couldn't change your house or your job or your friends or your town or your country, unless you were one of the privileged—and there was no means for one not born into the ruling circles to join their happy ranks.

The press was muzzled, money could not be made save in ways approved of by the Empire. Arms could not be bought or made—because all raw materials were carefully guarded, and the life of every citizen was so open to inspection—that no man could ever have had the unspied-upon leisure to make a bow-and-arrow, let alone the really powerful and numerous armaments that Rathgarm had collected before his final assault on the capital Cities of the World.

"It seems like a miracle even now," the young officer said, offering Rathgarn his cigarette-case. Rathgarn shook his head. "How on earth did you manage to elude the detectors, for a start? How on earth, once you'd done that, did you get past the controllers of raw materials, of factories. And then, how did you manage to get the word around that you'd done all this? And—but this is the most miraculous of all—get people to credit the fact that you were actually speaking the truth?"

Rathgarn smiled to see the enthusiasm in the young officer's eyes. The dethroned Leader was thinking, what good material for our Cause this boy would have made! Rathgarn sighed a little, and said:

"I think I will have one of your cigarettes, Captain, after all."

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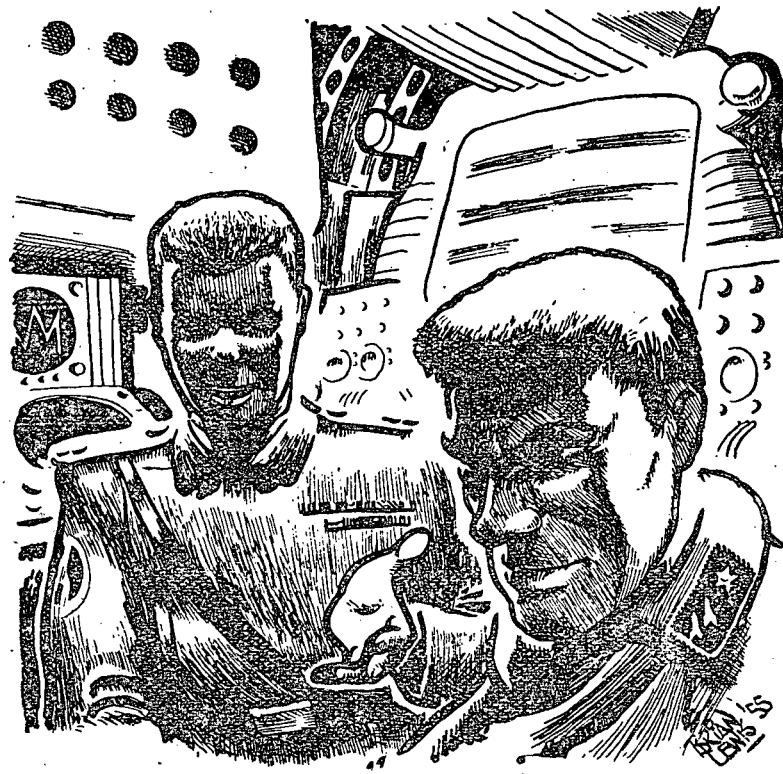

The case came out again and Rathgarn took a cigarette and lit it from the flame of the Captain's lighter.

"I can't tell you anything very much," said Rathgarn, "because it wouldn't do to give away any secrets which might damage our Cause. The Empire is doomed, certainly, but a lot of suffering will be saved by avoiding a fall into anarchy. We must take over rule from a still strong Empire. So . . . I can't tell you anything very much, you understand?"

The Captain stared in astonishment at the older man. He managed to stutter:

"You . . . You still think you haven't lost?"

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" Of course," said Rathgarn. " I know we haven't lost. Why . . . did you get the impression that capturing me meant the defeat of our Cause ?"

He smiled condescendingly, and the young man flushed at the gentle sneer. The quick upsurge of anger the sneer provoked gave the Captain courage to find his opinions again. He said scornfully :

" I don't think that capturing you meant the end of the Cause—though it can't have helped its chances, seeing that you were the Cause, and the Cause—as you call it—was you. But there's no need to think that anything of your precious Cause could have survived your capture: the fact that we destroyed or seized every weapon and piece of ammunition you'd collected; rounded up every member of your movement; and put every prisoner—not only you, make no mistake—under perpetual surveillance; must convince even you that we broke up your organisation pretty thoroughly." The anger died away from his voice, to be succeeded by a frank puzzlement. " No, but seriously . . . You don't mean to say you think we haven't crushed your movement?"

Rathgarn said, without a trace of warmth in his even tones, " It is you—the Empire—which hasn't the chance. The earthly chance, as you say. We are bound to win." He added:-" Let me tell you one thing, Captain: if it was a miracle to you that we could have collected men and arms in the sort of world that the Empire has made, it would be a greater miracle if we failed in the end, than if we won."

So the conversations went on, day after day, as the small, swift craft nosed her way through asteroid shoals and clouds of meteoric dust—going straight as an arrow or in the gentle curve of a taut bow, held in a rock-hard fist. The friendship between captor and prisoner grew, though never to the point at which Rathgarn trusted the Captain, or the Captain for one moment forgot his loyalty to his soldier's oath. Yet, for all that, the Captain's questions became more and more personal, more and more detailed—the more so as Rathgarn seemed not to mind answering most of the questions.

The Captain's mind was of the practical sort. Rathgarn could see that the young man was not so much interested in the Why of the revolt as in the How.

" But *how* did you manage it ?" the Captain used to ask—day after day, and hour after hour. Until, one day, as the corvette was on the long, wide sweep which would take it beyond Venus, Rathgarn smiled a sort of encouragement to the added: " It's the technical details of the planning which interest me. How did you manage . . . sir ?"

It was the first time since the Captain had been assigned to guard Rathgarn, that he had called the prisoner, ' sir.' But the odd thing was that neither man remembered that until each had retired for the night period.

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Rathgarn said :

" Winning and losing, Captain, in national affairs as in one's own personal affairs, is all a matter of psychology. You are not merely impressed by mass-production — you are, I'm afraid, blinded by it.

" If you can get it out of your head that we did not need factories; *if you can get it into your head that a small lathe can turn out all the* component parts of all the weapons that we used—and remember that the lathes were mostly hand-operated, and that you can't—you simply *can't* track down every lathe, when there are literally hundreds of thousands of them in use—you may realise, not only how relatively easy it was for us to arm ourselves, but how fairly easy it was for us to come within a hairsbreadth of success."

" Yes, but you had to get the lathes, for a start . . ."

Rathgarn stared down at the eager, puzzled, rather simple young face, and found himself thinking how easy it would be—even now—to convert and capture this youth; fire him with a loyalty to the 'wrong' the 'lost' cause more binding than any which bound him to the outworn cause of the Empire. But Rathgarn knew that it would help neither of them to do that. The spy was spied upon, and each spying spy had another spy to watch him for ' deviation.'

Rathgarn put the thought aside. He said, " Had to get lathes ? My dear young man, a lathe can be made out of a kitchen chair . . . and two hands "—he held his own strong, unshaking hands out— " are all you need for motive power. You can't stop people making things. If the things are small enough, they won't need a factory. Prisoners "—he smiled to see the Captain look embarrassed for a moment—" prisoners make all sorts of things in a prison-cell. There was a man I read of in an old book who . . . I forget now what he did, but it was something quite astonishing."

Rathgarn looked keenly at the Captain; but the young man did not seem to have found anything odd in the sudden lapse of Rathgarn's usually perfect memory. For Rathgarn had not only remembered what the prisoner in that long-distant American prison had done—blown himself up with a piece of iron-piping, a pack of linen-backed playing cards and a candle (yes: Rathgarn reminded himself: *and* infinite patience, too ! *And* unswerving purpose)—but Rathgarn had realised, on the very verge of indiscretion, how useful the knowledge of the prisoner's desperate ingenuity might be to him—Rathgarn, another prisoner.

A few hours later, the Captain remarked, with apparent forgetfulness of how the conversation of that afternoon had finished: " You know,

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sir "—and now he called Rathgarn 'sir' continuously—"there's one thing you can say about the Empire."

"Oh? And what's that?"

"Well . . . the world is more civilised now than it used to be."

"Indeed?" The icy sarcasm made the Captain colour up.

"Yes, sir"—stiffly—"more civilised. In other days, you would have been shot—or worse. Perhaps tortured. The Empire doesn't kill, sir."

"Except that it killed quite a lot of us in putting down what you call our 'revolt'."

"Necessity of the moment, sir. What I meant was, we don't kill in reprisal. The death penalty, even for tr . . ."

"Even for traitors. Oh, go on, I don't mind a few harsh words."

"Even, then, for traitors, sir. You are being exiled. Nothing more can happen to you, under the law."

"You won't let me starve, even?"

"No. Though," he added, "if you wish to kill yourself, we can't stop you!"

The remark had interested Rathgarn. His attention quickened.

He had no intention of committing suicide; he wasn't that sort of man—that sort of loser. But he was deeply interested in the means by which suicide would be possible. Because, he told himself, those means might serve a better, more useful, purpose. Just to fish for information, he said lightly:

"Cut my throat, you mean?"

"All we try to make sure you don't do," said the Captain, answering the question in his own way, "is to leave the asteroid. Naturally, we leave you all sorts of things that you could kill yourself with, if you wanted to. But so long as you don't—so long as you *can't*—leave the 'roid, we're quite satisfied. What you like to do with yourself, once you're on it is, as I said, your business. I've given a receipt for your body, and once the door of the dome has closed behind you, and the Captain has put his seal on the lock, I get my receipt back."

Rathgarn did not pursue the question. He did not say: "And what should I kill myself with?"

Instead, he ran over, in his mind, the list of things they had said they were leaving with him on the asteroid.

They had even asked him his preference for underwear, drinks, food, smokes, reading-matter, videos; invited him to ask for things—even unnecessary things—not down on the official quartermaster's list.

Scenting a trap, Rathgarn had asked for nothing. He would improvise as he had always done—out of the materials to hand.

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The really important fact in all this mass of facts, Rathgarn knew, was that his captors were quite unaware of the motives behind their actions—and they must remain equally unaware of the motives behind his.

On the fully conscious plane, they did not, in any circumstances, wish to kill him, true, but they were also quite sincerely anxious to make it impossible for him to escape. There was no *conscious* make-believe about his sentence of perpetual solitary confinement.

A 'day' later, Rathgarn was alone in the dome, still in his space-suit.

Yet, above all, Rathgarn thought, there rests—for my benefit—the tremendous potential of that fact that no-one yet has got away. What that means, in terms of possibility, is this, that everything here, in this dome, has so far never been used for the purposes of escape. For if it had, it would not be here.

Something must be tested at once.

He had been astonished—though he had kept his astonishment to himself—that they had not taken his space-suit away. It seemed to him that, if they wished to keep a prisoner within the dome, taking away his space-suit would ensure that, without any doubt.

He looked at the air-tester on the right forearm of his suit. It showed a brilliant saffron-yellow. Normal air. The two dials alongside the glass tube of the tester showed pressure to be normal, and temperature to be sixty-five Fahrenheit.

He came to the lock, and examined it without touching it. It was a type commonly fitted to space-craft, and if there was a lock of the sort that he had suggested, it was on the outside.

He slowly, comfortably, got out of his space-suit, and went into the kitchen. He saw with satisfaction that it was well stocked. He got down a tin of coffee, pulled off the strip of plastic which activated the heater, and put the tin into a copperite mug.

The tin dissolved—old habit persisted in calling the containers 'tins'—and he flicked the surface of the steaming coffee lightly with the glycerating rod hanging over the stove, to release the sugar in the drink.

Grasping the mug in both hands, the man walked across to a comfortable chair, placed handily in front of the video that he did not propose to touch, and sat down to think.

An hour later, Rathgarn had tested the lock of the outer port with a home-made Geiger-counter, the gold leaf for which he had scraped from the spines of some elaborately bounds *Laws of the Empire*.

First fact: the lock was not radio-active.

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Second fact, discovered by a simple adaptation of the all-wave receiver they had so thoughtfully provided: the lock was radiating a signal. Just one note. Middle C.

The man made some more coffee, but this time he set it down on a low table by the video, and did not sit down to drink it.

He began a search through the dome, to see what they had left him which could provide the means of escape.

That he was able to do this only because he was no longer in the company of his gaolers made the silence and the loneliness of the dome extraordinarily attractive to him. He knew that there would come a time when the loneliness would begin to pall, then to irritate, then to bore, and eventually to terrify. But he hoped that he would not remain in the dome long enough for loneliness to inspire anything worse than boredom.

For the first time in nearly two years, he felt alone—and the feeling, he told himself aloud, was wonderful.

Taking his mug of coffee, he began to walk around the large living-room, considering what *he* would have done to a prisoner, to make sure that the prisoner remained locked-up.

Then he rejected that line of thought as unprofitable. A gaoler and a prisoner look at the facts of imprisonment from two irreconcilably different points of view. The man was now a prisoner: he had both the disadvantages and the advantages of a prisoner's viewpoint. But he could not hope to be able to look at matters from the gaoler's point of view. Better not confuse mind and issue by trying . . .

The door, now.

If his space-suit was equipped for walking outside, then, in order to walk outside, he would have to leave the dome by the air-lock. Correct? Indeed.

In that case, he could either close the lock behind him, or leave it open. Disregarding the second choice, how did the watchers know whether the closed lock had closed upon the prisoner or not? In other words, whether or not the prisoner was within the dome, even though the air-lock were closed?

The constantly radiating note would be interrupted, as the lock opened. Did it resume again, the moment that the lock was closed? That, he decided, was something which would have to be shown.

But if the middle-C note began again the moment the lock was closed, whether or not the prisoner was within, then how could the watchers tell whether or not the dome held him?

He pondered that, striding up and down the room. It would, he realised, be easy enough to fix. His weight on the floor, actuating a kappa-switch, could alter the note in some way.

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Or . . . so much simpler. Had they fixed a spy-ray?

He grinned, and put down his coffee on a table. He went to the smaller of the two store-cupboards, and got out some plain sugar. Then he picked up the cup, as well as the sugar, and walked off to the toilet, which—for all that he was never to have company—was fitted with the usual door.

He went in, closed the door behind him—there would be no spy-ray here—and put a lump of sugar in his mouth, sucking it until the sugar had melted, but not swallowing anything.

Then he poked a finger into his mouth, until the finger was well covered with sugar-solution.

As long as ten years ago, this simple device for detecting a spy-ray had been evolved by the rebel counter-espionage. The members of the Underground were injected with an isotope of thorium and of another element that even he—the Leader—had never heard named. The effect of these injections was to make sugar, in contact with the body, fluoresce in the presence of a *lambda*-ray.

He came out of the toilet, and walked to a darkened corner of the main room, glancing casually at his finger-nail. Then having made a complete circuit of the room, he went into the smaller rooms: store-room, workshop, bedroom, bathroom, study, kitchen. Not until he had come back into the main room did he accept the fact that—at that moment at least—there was no spy-ray trained on him.

The presence—or otherwise—of a prisoner, then, must be reported by some modification of the reporting note. There were several ways in which that could be done; though the most probable was the easiest: to let the prisoner's weight actuate a kappa-switch.

That didn't matter so much—the *how*. What did matter was this: what did they do when their alarm-system reported that a prisoner had gone out—say for a walk? And what did they do when the same spy-system reported that he hadn't come back?

Rathgarn decided that he must assume that they would do *something*. In that case, how soon would they do it? More, how much time did that leave him to make a getaway? "That," he said grimly, sitting down, and resting his mug on his knee, "depends on the velocity of escape."

It might be, he reflected, that the outer door of the lock was sealed against the prisoner. And that presented a difficulty. It meant that he would have to make all his preparations for escape, on the assumption that the door could be opened. For to test the door first might make it impossible to continue with the preparations.

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" Like Crusoe," he said, " Like building that boat of his, and finding he couldn't haul it down to the sea."

Idly the man wondered if the Empire psychologists had deliberately presented all prisoners with that dilemma: to test the door and lose the advantage of surprise, or to risk the fact that the door might be unopenable, so as to be able to proceed with the preparations for escape.

Suddenly, he knew that not only had the psychologists prepared this dilemma, he knew that it was the certain fact of a prisoner's coming up against this dilemma which had prevented any from making more than the initial preparations to escape.

Only the dangerous men were marooned. And the dangerous men were all clever. And the psychologists could bank on the fact that the clever men would sooner or later get around to the insoluble problem of the door.

The man caught himself up.

" Insuperable obstacle ?" he said aloud. " We'll see !"

Besides—he glanced upwards—one could always just crack a hole in the plastiplex of the windows. Following a thought, he got up and went into the work-room. There was one piece of information that the Captain had volunteered: that gravity had been built into the asteroid—it was not in an artificial-gravity unit built into the dome.

" You can see the reason for that ?" the Captain had said. Of course. If it were in the dome, you could get at it, switch it off, and sail off . . . to somewhere.

" Meteors . . . ?" the man had asked.

The other had shrugged.

" There's no force-field either. You don't get many meteors where you're going. Which is why they selected the spot. If one hits, and penetrates, you have plenty of time to slip into your suit, and plug the leak."

That was why they had left him the space-suit. But he could still be mildly astonished that they had, all the same.

There were other ways of sealing a leak than by the use of a space-suit and a bit of manual plugging.

The officer had added, almost with the air of an afterthought: " Oh, and the anti-grav unit in the asteroid—that's where you're going to be landed—is fitted with destructor seals. If you tamper with the mechanism, everything will blow up—you included. That's what I meant," he added, with a quiet smile, " when I said we couldn't stop you from committing suicide if you were really set on it."

Rathgarn was thinking. If there was no force-field to keep stray meteors out, there was no force-field to keep him in.

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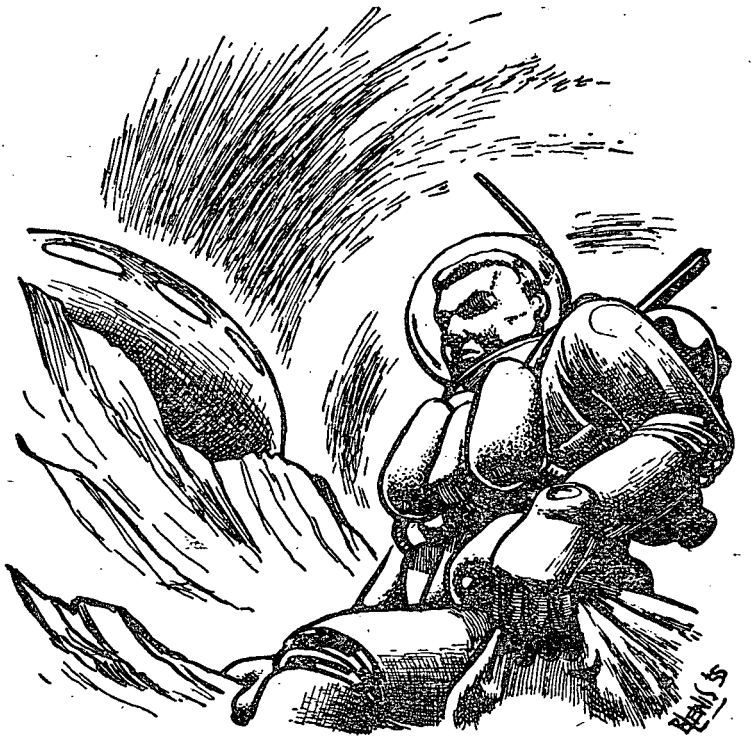

He needn't bother about the door, though that was not to say that there wasn't some alarm system to show whether or not the dome had been pierced.

But . . . and the man's eyes narrowed in speculation . . . suppose that he did break through, and chanced the loss of a minute or two by sealing the hole ?

No—he snapped his strong fingers and said, " Ah ! yes !"—this was the way. Break a hole, seal it up, and see what happened. Leave the door alone.

Steady now ! Do it quickly. Get the mending equipment out, all handy. Make a hole big enough to get out through, so as to be able to carry the pieces from the outside to the inside—just in case they did

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come around, to notice that the splinters of plastiplex were on the wrong side.

Within an hour, he had broken and sealed a large hole in the 'west' window, and was sitting in front of the electric-radiator, a fresh cup of coffee in his sugared hand. The hand was very faintly glowing.

"As simple as that," he said—but not aloud this time. "As simple as that. A spy-beam."

As he watched his hand out of the corner of his eye, the glow disappeared. They did not, then, keep up a twenty-four watch: it was even possible that the beam was automatically cut in by the fall in air-pressure consequent on the fracture of the dome. Could be.

He worked out times, and then—for it was the most natural thing in the world that another meteor should hit the dome again, if a swarm of meteors were really passing—he broke another window, and repaired it as before.

In his space-suit he could not see his hands, so that he had put a little sugar solution on the tip of his nose, and arranged a mirror into which he could look without its being too obvious what he was looking at.

The spy-ray, as he thought, cut in automatically, and was cut out ten minutes after the restoration of normal air-pressure. Just to be on the safe side, he tried again.

The spy-ray was automatic; and the chances were that the automatically photographed scene mightn't be looked at save at certain odd moments.

Well . . . he could get out. That was one thing. The next thing to discover was whether or not they came to inspect the damage.

They didn't, and after a week, he had reached the conclusion that a kappa-switch under the floor told them whether or not he was within the dome.

The spy-ray had not been on all that week—at least, while he was awake. The chances were that it was off during his sleep as well.

The man decided that the time had come to make his getaway.

Casually, all that week, the man had gone over his stores: though there would have been nothing suspicious in a most careful examination of what had been put there to keep him alive for anything up to sixty years.

There were two thousand books, and there were twelve gross of cotton shirts, there were one hundred gallons of sulphuric acid, there was an electric brazing equipment, an electric welder, a lathe—motor-powered or manually operated, as one liked; there was a quantity of steel and copper-sheeting, tubes, girders, rods, for the repair of the

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dome and all the things within it: lighting-equipment, refrigerating-plant, heating- and cooking-apparatus.

" How will they reckon I'll try to escape ?" Rathgarn asked himself, and he knew that he would have to find the answer to that question before he decided how he would make the attempt.

The answer came to him almost at once. He had been condemned by the System, and it was therefore as members of the System, as representatives, as servants, of the System, that his judges and his gaolers had worked to put him where he was. And would have worked to make certain that he stayed where they had put him.

He glanced about him, and took heart from the fact that everything that he could see had come from Government stores; that the mark of any personality in his captors was totally missing.

They would, then, expect him to be dependent upon what came out of stores for his escape. What they had denied him showed how they expected him to escape. No blaster—because a blaster makes a handy one-jet space-craft out of a man in a space-suit. No personal anti-grav, because a determined man could get a long way in space by the careful use of one of those. No ultra-wave radio, to call help, or even to maintain contact with his followers. No long-acting narco-pills, to put himself into a deep-freeze, and wait for a different political set-up.

Funny, he thought, but I was at college with quite a lot of them. You'd think they'd remember what I'd learnt—which was what they'd learnt. But there's always that tendency in the ' educated ' mind to believe that because one has progressed from the elementary to the not-so-elementary, not only has one forgotten the elementary, but that the elementary has ceased to be of practical use.

He looked at his fingers. They had forgotten about him. At least for the time being.

Pity they didn't remember some of the elementary chemistry they'd learned, not at college, but at high-school—or even before that.

Air . . . Yes: not only refills for the purifiers, as well as living plants in the hydroponic-tanks, and seeds as well in biological stasis, but row on row of oxygen-cylinders—enough (according to the stores-men's calculations) for sixty years and more.

Well, he wouldn't be here in sixty years time. He had another use for the oxygen.

Thinking quietly and almost cheerfully, he fixed up an electric arc, arranged a chamber to contain well-saturated air, and began the production of nitric acid.

The process was almost automatic; the attention that it needed was so small that he could get on with work at the bench. Mostly, his

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work consisted of hardening steel tube, and welding eighteen-inch lengths of the toughened tubing together, with the axes parallel, so that he had what looked like the barrel of a primitive multi-bore machine-gun.

He ate, and he slept, and he worked, and all the time he kept his eye on the sugar on his hand, to see that no spy-ray had caught up on his activities.

Sometimes he thought of his followers, and as he did so, he could see that, were he to escape, he would not only put new heart into all rebels by proving the vulnerability of the system which had caught him; he would turn his defeat into victory; turn the victory of the Empire into the bitterest defeat.

At an odd moment, he weighed himself. One hundred and seventy two pounds.

At various odd moments, he filled a couple of sacks with tins, until the sacks weighed, together, one hundred and seventy pounds. Then he put them aside, out of range of the spy-beam's eye.

Then, smiling a little at the unnecessarily fine quality of the white cotton shirts that They had supplied—but glad of the excellence of the quality, for all that—the man clipped the buttons off fronts and cuffs, and threw dozens after dozens of debuttoned shirts into a heap.

Had there been insufficient cotton shirts, there were the slightly coarser sheets, and the not-quite-pure-cotton underwear. And, had all that not been enough, there were the two thousand books. In all, he had several hundredweight of cellulose.

He had several large carboys of sulphuric acid, and he had made himself a sufficient quantity of nitric acid. What he had not—save only in a small, medicinal quantity—was collodion.

Nearly a fortnight had passed since the police-ship had marooned him on Asteroid NM-P 46729.

"I must hurry," he said, wiping the sweat from his forehead.

He grinned, a little savagely, as he muttered: "If I could have faked me a bad heart I could have saved myself all this trouble."

But it would have been difficult; it might have caused suspicion when they found that the pains that he complained of were due to no perceptible organic disturbance. And, besides, he hadn't thought of this method of escape until he'd seen what they had left him to escape with.

He had a very small quantity of glycerine, but he had literally tons of sugar, in various stages of refinement. Much of this he converted into glycerine, and with his nitric and sulphuric acids, he made himself nitro-glycerine.

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When he raised a glass beaker to the light, and saw the pale yellow oil, he knew a feeling of triumph sweeter and more burning than the poisonous yet curative oil that he had distilled.

His shirts, with the same mixture of acids, he converted into trinitro-cellulose.

He had acetone in such negligible quantity, that he could not hope to blend the trinitrocellulose and the nitro-glycerine, to make the cordite that he required, and though he had enough collodion to effect the blending, provided that he increased the proportion of nitro-glycerine in the blend, he was aware that to cut down on the collodion would render the resultant product violently and dangerously unstable.

"We must risk something," Rathgarn said, and put his chemicals away to set about perfecting a rapid drill that he had planned.

After some days, practising for hours at a stretch, he felt that he could seal a large break in the window within half-a-minute. If, of course, there was a human eye at the other end of the spy-beam that the breaking of a window automatically cut in, his drill would be wasted; but the man had more than a suspicion that no human eye ever saw him at the moment of inspection; that the human eye only scanned the recorded photographs.

Of course, if suspicion were aroused for one moment . . .

But, then, he must see to it that suspicion were never aroused.

The rest of that week, he spent in brazing on certain attachments to his space-suit. He also fitted on four sets of clips to hold oxygen-cylinders, and another set to hold a tank of water-concentrate. His food and other necessities, he could carry in a grip, to be belted on. He spent a further week making an old-fashioned explosive pistol, of the kind not seen on any planet (save in museums) for two centuries and more. For gunpowder, he had the sulphur that he had extracted from the sulphuric acid, the nitre from the nitric acid, and the charcoal he got from the wood of pencils. He was a good workman; his years with the underground had made it necessary for him to know how to use his hands—especially to make weapons.

But all the evidence of his activity he put away, out of the reach of the spy-beam.

The actual escape took about two minutes. He climbed up on to a table, carrying the sack, broke a window, and crawled out. He then threw the sack back, so that its weight of one hundred and seventy pounds should register his presence within the dome, and sealed the break in the plastiplex. Provided that no one had been looking in during those few moments, the air-pressure would now show that the leak had been sealed, and the weight pressing on the floor would

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show that someone was inside. The questing beam would show a figure, with its back to where the man guessed the beam was sited, dressed to resemble the prisoner. What the photo-recorder wouldn't show, of course, would be that figure getting up to mend the window —but the man had an idea that the watchers became interested in their prisoners only if leaks remained unsealed.

"Well," said the man, standing on the surface of the asteroid, and picking up his grip, "that's that. If I did anything wrong, it's too late to do anything about it now."

He moved quickly away from the dome, and circled a small 'hill' which lay a scant fifty feet from his prison. He noticed that the going was harder than he had expected, because gravity had been set to something more than normal. Twice or even thrice normal, he guessed; possibly to give the dome better protection against being knocked off the asteroid by an extra-heavy, or extra-fast meteor.

Not until he was safely out of the light coming through the windows of the dome did he feel safe. On the airless asteroid, there was no penumbra: he was in a total blackness quite unrelieved by the thick glitter of the stars. He looked around for a moment, trying to recognise some familiar constellation, but he had never been an astronaut, and he could only hope that he was still within the Solar System.

"Well," he said, "good-bye prison!" and pressed the firing-key of the multiple cordite-rocket fixed to his back.

They were, in fact, the last words that he was ever to speak, for, though he had thought of many things, he had forgotten—and so not accurately allowed for—the inertia of his own one hundred and seventy pounds of body, at three times normal gravity.

He had feared that, short of collodion as he was, he might have made his cordite unstable—that it might explode prematurely, uncontrollably.

Nothing of the sort happened. The tubes fired in strict order, and at the arranged intervals. The trouble was that the thrust of the first explosion was so powerful that it flattened the back-plate of the space-suit against the breast-plate . . . and this, although there was a man in between.

The 'jets' had been set to fire at five-minute intervals, and as the man was not quite killed outright, he had time to think a few thoughts before he died.

It was a pity that, in those last agonized moments, Rathgarn's clear-sighted apprehension of the truth should have deserted him. That he should have thought that he had failed.

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News gets around more quickly in a rigid system of censorship than when it is free to travel. The reason for this is that the attempted suppression of news—all news, any news—gives even the most trivial gossip an exaggerated value. There is a triumph in having any news to tell at all, where all is restricted by censorship. And the triumph is not in having the news, but in being able to pass it on.

In a Dictatorship, everything which happens is known—just as, in the Army or on a ship, every newspaper is read from cover to cover. Restrict the news, and you will give all news too great a value.

Thus, the escape of Rathgarn could not be kept secret. The Empire tried to suppress it but no one ever knew who it was who had talked.

At first the rumour that Rathgarn had beaten the invincible Dictatorship ran around a dozen worlds only as rumour. Then the Federated Government of the Empire issued a denial; and that gave strength and purpose to the rumour. And, after a while, everyone of the teeming billions of the Empire knew that the most important prisoner the Empire had ever captured and sentenced to life imprisonment had beaten them. Beaten the Empire with something that the know-alls of the Empire had been tricked into supplying! No matter that some hundreds of men associated with Rathgarn's imprisonment were subjected to the psychoprobe—and, when the probe revealed that they had had no hand in the escape, were sentenced to long terms of imprisonment themselves for the crime of not having thought one jump ahead of Rathgarn.

The Captain was not one of those who were punished. The Probe showed that his loyalty—even though he had admired Rathgarn—had never been less than one hundred percent. Yet the Captain, if the Empire and he had only known it, had been one of the Empire's most dangerous enemies.

For, being a young man, with no great fund of experience to draw upon, he liked to tell—over and over again—the story of those weeks on the corvette which was taking Rathgarn to Asteroid NM-P 46729. The young man's memory was excellent, and he remembered practically every conversation—even the most trivial.

Some of his listeners were not loyal to the Empire. They hung upon every word, flattered him to repeat the conversation—over and over again.

So, at last, a Book began to circulate throughout the discontented masses. The underground presses churned the Book out in its hundreds of thousands—its millions—of copies. Passed from hand to hand, read in every kind of secret place, the Book reached where even Rathgarn's words had never reached.

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It was not the first time in history that a Book had kindled the flame of revolt, had brought men to stand and shout and fight for freedom. Even Rathgarn had not known, as he whiled away the hours with the Captain, that he was speaking, not to one raw young soldier, but to an Empire of federated worlds.

This time, the organisation that the rebels built up learnt by bitter experience. They did not make the same mistakes twice, and when they struck, they struck with confidence and skill—against an enemy already demoralised by the consciousness of error, by the consciousness that it had staked everything on its reputation for being invincible and omnipotent. And had been proved, by one ' helpless ' man to be both wrong and powerless.

The Empire crumbled under the assaults of the rebels and there came a day when a new flag floated over the government buildings on Earth, Mars, Venus, Ganymede, Mercury, and the rest. But the leaders of the new free world waited in vain for Rathgarn to reappear and assume the cloak of Leader. An investigating party of high-ranking officials visited Asteroid NM-P 46729 but found nothing of any importance to show how Rathgarn had escaped—as he had intended that nothing should be found—although a small scrap of paper bearing some words in pencil was discovered, obviously written by Rathgarn, which eventually passed into history and legend :

" *The right man to unlock your prison for you is your gaoler. For he is the one who has the key.*"

Michael Harrison

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The *raison d'etre* of escapist reading—in which category science fiction exercises its main purpose—is, I would suggest, to provide vicarious entertainment, an indirect self-projection on the part of the reader. He, in his comfortable armchair, can roam past or future ages, explore the universe and battle alien creatures of fertile imagination. The impact of the story depends on the extent to which the reader can imagine his own participation, and characters with which he can identify himself in wish fulfilment. The variety is infinite according to individual taste and subconscious desire. From Dickens to Maugham, from Dumas to Forester, the successful novelist provides realistic experience by proxy, transforming dull lives into unattainable adventure or at least giving glimpses of the different lives of other people. For the same reasons it is easy to understand the popularity of the titillating element throughout the history of writing from Shakespeare and Boccaccio to the ominous modern level of Spillanism and the post-war tough, free-spoken novel. The difference with science fiction is that credibility can be more easily discarded and the hero-reader becomes, for example an intrepid spaceman in conflict with bug-eyed monsters, and the heroine is scantily dressed in far more interesting situations that can be depicted in any Earthly plot contrivance, whilst on a higher level extrapolations of moral behaviour can be usefully exploited. Edgar Rice Burroughs had the secret of firing adolescent imaginations, whether in old or young minds, and the same principle applies when the writing is, let us say, less simple and more acceptable to more adult thinking, cloaked as it may be with scientific terminology (or pseudo-scientific concepts) or just plain erudition.

The disadvantage of this aspect of incredibility is that the ideas and backgrounds tend to become fact and commonplace in acceptance as modern technology develops rapidly to its apparently juggernaut finale. And so the current crop of science fiction authors are forced either into wildly unbalanced variations of old plots, or to delve into the comparitively new field of the latent potentialities of the mind for new themes. The popular trend now is to combine the two in specialised pictures of possible futures postulated on the present progress of a civilisation hounded by the many neuroses inherent therein.

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This month's selection of new novels offers a representative cross-section of this departure in science fiction, and as the authors happen to be experts in their own field, the results are extremely acceptable.

Best of them is John Wyndham's **The Chrysalids** (Michael Joseph, 10/6). Mr. Wyndham excels in adding lustre to themes familiar to science fiction readers by attention to realistic detail and considerable literary skill in plotting and characterisation. His novels come to life by virtue of his thoughtful awareness of the problems that could one day face mankind, however improbable (but how convincingly told !), as for example in his successful *Day of the Triffids* and *The Kraken Wakes*, both of which reached the appreciation of a far larger public than science fiction enthusiasts. With a commendable change of plot, his new novel concerns the problems of telepathic children in a post-atomic community which fanatically eschews any deviation from the premutation 'pure' strain, but happily his 'freaks' win through in the end to establish a new era. There is a wealth of warm emotion in this sincere picture of the advent of homo superior, and an increasing maturity of vision which left me very satisfied at the finish. I hope you too will read and enjoy this fine book.

By contrast, Wilson Tucker's **Wild Talent** (Michael Joseph, 10/6) is a superficial novel of a telepath who becomes involved with secret service operatives in America. Ingeniously plotted and slickly written, it nevertheless barely touches on the human problems of normals in conflict with this wild talent. Familiar to readers of *New Worlds* where it was serialised last year, the amusing appellation of the chief characters will be lost on non-s-f. regulars, but the ideal example of hero/reader identification—the telepathic angle must surely open endless vistas to the imaginative but otherwise restricted reader—combined with forceful tempo of action, makes for good entertainment.

Next come two perfect examples of possible futures, and both are satires whose underlying premises I vehemently reject. No less frightening to contemplate than '1984' is Shepherd Mead's **The Big Ball Of Wax** (T. V. Boardman, 10/6) despite its uproarious, nay bawdy, treatment. Coinciding with the advent of commercial television in England, we are regaled with an extension of the 'feelies' in Huxley's *Brave New World*, taped experiences (of every conceivable variety !) relayed by super-television stations to the helmeted viewer who actually lives the entertainment provided. Here's the ultimate in armchair escapism with a vengeance. Want to enjoy a banquet (and sustain life on cheap but wholesome food) ? Make love to a beautiful woman (with *all* the trimmings) ? Everyone can share, and the XP invention sparks off a racketeering cult. But a single-minded

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advertising executive (a superbly smug character) seals the fate of mankind when the machine's advantages for compelling advertising are irrevocably unleashed upon an unsuspecting consumer public. This is a book you simply must read, if only for laughs—then you can't say you haven't been warned.

In **The Space Merchants** (Heinemann, 10/6) the now celebrated team of Frederick Pohl and C. M. Kornbluth, both talented authors and experts in the advertising industry/racket, reveal the possibilities of a future world dominated by giant advertising agencies and corporations. Once again there is the loyal executive who is given the task of putting over to the public the idea of emigration to Venus. He runs foul of rival agencies, an underground movement, even his wife, before he finally sees the light. If there is one fault it is that the authors seem to have had a change of heart halfway through the book, and the story degenerates into a highly improbable series of adventures besetting the hero, whose own change of sentiment is too conventional. The writing, as always, is crisp and intelligent, and as an example of modern science fiction at its most thought provoking and entertaining, it is recommended.

J. T. McIntosh's second novel **Born Leader** (Museum Press, 9/6) attempts to portray the conflict between interstellar pioneers from Earth and their first generation born on the new Earth-type planet. The emotional difference is more vivid than the clear-cut age gap would indicate, for reasons the author explains, and the characterisation is finely depicted. A leader arises from the youthful element and it is his fight for the resurrection of atomic power—now outlawed by the original settlers because Earth died from its effects—and his breakaway from the older generation to form a new way of life, that forms the basis of this powerful novel. Complications are caused by the discovery of the settlement by a militant group who were the last to leave the dying Earth and had settled on a neighbouring planet in the system. The conflict is resolved by the newly-found atomic power and the difficult task of forcing freedom on the vanquished totalitarian faction is begun. The uncompromising attitude of the latter is somewhat unconvincing; I should have thought their behaviour would have been otherwise, profiting by experience back on Earth, but Mr. McIntosh, who is obviously a keen student of human nature, presumably knows best. In any case, the theme provides an excellent and mature science fiction novel.

Imaginative speculation induced by thought-provoking ideas is the prerogative of science fiction readers. Among the more fascinating

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concepts is surely that of being transplanted in time and what one could do to maintain existence. Supposing, for example, you are a young archaeologist, unimposing in most respects but with a specialised scientific education including knowledge of some early languages. You are in Rome, and happen to be discussing the nature of time and the weak focal points in its fabric—the intersections of great events in past history, and the subsequent futures which could follow a distortion of those factors. This is the world of fantasy, so the lightning flash that strikes near you as you stand by the Pantheon neatly carries you back to sixth-century Rome when the Goths ruled Italy and Western civilization was collapsing. Can you imagine what would happen to you? In **Lest Darkness Fall** (Heinemann, 12/6d) one of America's foremost science fiction authors, L. Sprague de Camp, paints a vivid picture, with much artistic licence, of how such a man, Martin Padway, reacts in these circumstances.

Armed with little but his own quick wits and a rough knowledge of the history of the era, his influence expands with the aid of a few 20th century ideas and inventions (the latter appallingly limited when it is considered what resources are needed to provide the humblest modern contrivance) and he rapidly becomes involved in politics, war and women. Despite its sparkling humour and the lighthearted treatment of the theme, the urgency of Padway's problems and his efforts to avert the engulfing darkness of barbarism become increasingly gripping. When I first read this story in the pages of *Unknown* many years ago, it was hailed as a minor masterpiece of fantasy. I see no reason now to disagree with this verdict.

Jack Finney's **The Body Snatchers** (Eyre & Spottiswoode, 10/6d) must also be included in this column as an eminently readable fantastic thriller. It was recently chosen as *The Star* Thriller of the Month but the theme is nothing less than that of alien life from outer space attempting to take over Earth by means of an ability to transform into human beings by absorbing the entire body, including personality and memory, of each unfortunate Terran host. The setting is a small American town in which a young doctor gradually discovers the insidious menace, and the suspense mounts somewhat terrifyingly as the last two *human* survivors fight to escape from the town to spread the alarm and finally force the alien life-forms to leave this planet to continue their cosmic wandering. As science fiction it is irrational and the mechanics of its plot will stand little scrutiny; as a thriller of the slick American school, with its fine flavour of fantasy and suspense, it succeeds admirably, and its economy of writing and realistic characterisation makes it easily digestible.

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C. M. Kornbluth is probably one of the best top American authors of modern science fiction. I find him consistently good and his superb collection of short stories, **The Mindworm** (Michael Joseph, 12/6d) is a distinctive addition to the publisher's 'Novels of Tomorrow' series (notwithstanding its short story content) chosen with a discernment I much admire following its unaccountably modest original publication in America in pocket-book format titled *The Explorers*. Here are a round dozen impeccably styled stories which brilliantly reflect from the many facets of mature science fiction. One of the titles is familiar from the pages of this magazine, "Gomez," the amateur scientist whose supra-normal ability in atomic mathematics confound top American researchers and security, and readers of *Science Fantasy* will know the title story with its powerful theme of a mutant emotion-sucking vampire. Then there is a neat vignette of the fraudulent "Rocket of 1955"; the guilt complex of the man who made space-flight possible in "The Altar at Midnight," and the marvellous "Little Black Bag" which came from the future to give back a dissolute doctor his ideals (what a perfect ironic ending !). "The Goodly Creatures" is a searching introspection anent the advertising rat-race and the other kind of space dedication; "Friend to Man" chills with a touch of horror-filled retribution, and "With These Hands" shows a gentle bitterness.

But it is with such imaginative extrapolations as "That Share of Glory," "The Luckiest Man in Denv," "The Silly Season" and "The Marching Morons" that Kornbluth's genius really comes into its own. He writes vividly, with a cynic's sense of humour, and reveals himself as a man, knowledgeable in human frailties, fearful of the destination of Man and the dubious methods of his travel, and above all with an exceptional capacity for projecting his original mental exercises into stories which are entertaining, yet disturbing. In other words, the *new* science fiction, as remote from Buck Rogers as Koestler is from a child's first primer. Obviously I like reading Kornbluth—I appreciate his shock tactics and revel in his repudiation of the less noble aspects of Americanism. I am fascinated by the results of his mental processes and consider his writing has a force and vigour essential for the emergence of modern science fiction. I cannot think of a better reason for buying this book.

Leslie Flood

Continued on page 128

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Non-Fiction

One must admire the speed and ingenuity with which author Patrick Moore has managed to produce **Earth Satellite** (Eyre & Spottiswoode, 15/-) the first book to deal at some length with the new space satellites which have been projected by both the American and Russian governments for (presumably) 1957. Mr. Moore's book, written in a light entertaining style for the benefit of the layman, covers all the well-known approaches to space-flight and perforce suffers from the handicap of being the latest in a long line of such books. Its saving grace is the four chapters devoted to the satellites themselves which deal with the many possible scientific advantages high altitude research may bring in the not-too-distant future.

One of the most interesting non-fiction books published this year is **Mysteries Of Space And Time** (Frederick Muller Ltd., 15/-) by distinguished astronomer Dr. H. P. Wilkins, F.R.A.S., who effectively and comprehensively discusses and elucidates upon the many mysteries surrounding us not only in our own small area of space but throughout the universe. Its presentation as a readable, enjoyable and educational book far exceeds any recent publications on popular astronomy because of the author's depth of understanding for his subject matter.

To the reader interested in the " flying saucer " controversy (whether ' pro ' or ' con ') mention must be made of M. K. Jessup's **The Case For The UFO** (Arco Publishers, 15/-) wherein the author has endeavoured to present the case of the " unidentified flying object " as an authentic occurrence over the centuries, albeit from angles remarkably similar to the case-histories of unexplained phenomenon compiled by the late Charles Fort. That the author is an instructor in astronomy and mathematics at the University of Michigan and Drake University merely alligns another reputable personage on the side of those who believe that we are being observed by some form of alien intelligence.

Finally, as a Christmas gift for children, Rathbone Books present **Man Must Measure** by Lancelot Hogben (15/-) another fabulous pictorial book in their " Wonderful World " series, this time on mathematics, wherein by beautifully presented pictures and diagrams and a fascinating text the magic of numbers is explained from the Dawn of Civilisation down through the ages to the era of our modern technological age. Few books could be more acceptable to the 8-year old and upward.

John Carnell

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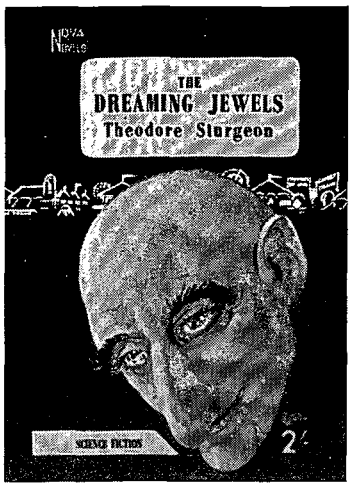

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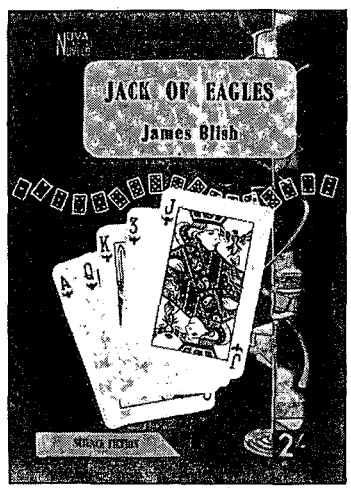

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